

Obesity

Perception and policy

**Multi-country
review and survey of
policymakers 2014**

Contents

1.	The survey: introduction and summary	3
2.	Obesity: the background	4
2.1	What is obesity?	4
2.2	The health implications of obesity	4
2.3	Why obesity should matter to policymakers	5
2.4	Taking obesity seriously – internationally, regionally and nationally	7
3.	Summaries of obesity realities and policy	8
3.1	Brazil	9
3.2	Bulgaria	11
3.3	Canada	13
3.4	Denmark	15
3.5	England	17
3.6	France	19
3.7	Germany	21
3.8	Italy	23
3.9	Mexico	25
3.10	Spain	27
3.11	United States	29
4.	The policymaker survey	32
4.1	Survey methodology and policymaker demographic	32
4.2	What? – the extent of obesity	33
4.3	Who? – responsibility for obesity	35
4.4	Why? – drivers of obesity	37
4.5	How? – prevention, treatment and management of obesity	40
4.6	When? – obesity priorities now and in the future	46
5.	Summary of survey findings	49
	Appendix: Country snapshots	51
	References	54

Acknowledgements:

Thanks to Katy Cooper (C3 Collaborating for Health) for writing the report, to the experts who contributed to the content (see country pages), to Florence Smith (C3) for research assistance, and to Garth Stewart for the design and layout of the report.

1. The survey: introduction and summary

Over the last few decades, rates of obesity have been rapidly rising, first across the developed world and, more recently, in developing countries. The health impacts can be myriad and serious, and the implications for individuals and for governments – including increasing health-care costs and falling economic output – are clear. Policymakers will be faced with the financial consequences of obesity – and they are well placed to take action to control the epidemic and its health repercussions, through better prevention (involving many government departments) and management. However, **are their perceptions of obesity and obesity policy accurate?** Do they appreciate the extent of the epidemic, the drivers of obesity, and the tools and actions that need to be taken to make a difference?

To address these questions, the European Association for the Study of Obesity, with C3 Collaborating for Health, surveyed 333 policymakers, from legislative and executive branches of government, in 11 countries – **Brazil, Bulgaria, Canada, Denmark, England, France, Germany, Italy, Mexico, Spain and the United States**.^{*} Those who took part were selected for their position in government, not for their particular responsibility for obesity.

The survey found that almost all the policymakers saw the individual as having **responsibility for reducing obesity** in the future – with family and the food industry also having a powerful influence. Other groups, such as health-care professionals, government, society and employers were seen as less responsible. Similarly, while physical activity, and marketing of and access to unhealthy food, were seen by a large majority of the policymakers as being important **drivers of obesity**, there was less consensus on the strength of the role played by issues such as limited finance and genetics.

Policymakers varied in their response to questions on **national obesity policy and tools and their effectiveness** – and, as the country summaries make clear in the first part of this report, the countries vary greatly in the extent to which policies to tackle obesity are in place. Policymakers' perceptions of national policy and knowledge of policies and the impact of different approaches (such as lifestyle interventions, drug treatment and surgery) differed, both in terms of whether they are a good course of action and whether they are currently in place and effective.

The survey also uncovered some **gaps in knowledge** among many of the policymakers. For example, policymakers were often not fully informed on the prevalence of obesity and (in particular) overweight, and their responses about progress and policy do not always reflect reality.

There is clearly still more to be done to raise awareness among policymakers of the extent of obesity and overweight, the effectiveness and reach of different interventions, and the impact that obesity-prevention and -management programmes are having (and could have) nationally. If policymakers have solid knowledge of the extent of the challenge posed by obesity, and the existing evidence for what can be done and who needs to be involved, national policies are more likely to be put in place that adequately address the reality of tackling obesity in the population.

Do policymakers appreciate the extent of the epidemic, the drivers of obesity and the policies and actions that need to be taken to make a difference?

^{*} Two surveys were run – the first in April–May 2013 (covering England, Spain and the United States) and the second in February–March 2014 (covering Brazil, Bulgaria, Canada, Denmark, France, Germany, Italy and Mexico).

2. Obesity: the background

2.1 What is obesity?

Overweight and obesity are defined by the World Health Organization (WHO) as 'abnormal or excessive fat accumulation that may impair health'.¹ It is possible to measure the amount of fat (adipose tissue) in the body, but a simpler and more accessible measure (and still shown to be a reasonable indicator of disease risk) is body mass index (BMI) – which compares a person's weight to his or her height.* There are agreed cut-off points for defining a healthy or unhealthy weight:

- **Healthy** BMI is defined as being between 18.5 and 24.9 kg/m² (less than 18.5 kg/m² is underweight).
- A person is **overweight** when his or her BMI is between 25 and 29.9 kg/m².
- A person has **obesity** when his or her BMI is 30 kg/m² or over.
- Levels of obesity over 30 are then divided into three classes: I – 30 to 34.9; II – 35 to 39.9; and III – BMI over 40 kg/m².²

Fat accumulated round the middle (abdominal obesity) is known to increase the risk of disease, particularly type 2 diabetes, and greater risk of death,³ so another way to identify those of an unhealthy weight is to measure waist:hip ratio or waist circumference.⁴

The health implications of obesity affect some ethnicities – particularly Pacific and Asian populations – at lower BMI than the standard cut-offs, as the body-mass composition of these populations is typically a higher percentage of body fat. For Asian populations, BMI of 23–27.4 kg/m² is considered overweight, and over 27.5 kg/m² as obese.⁵

Overweight and obesity are the result of an imbalance between the intake of calories (consumption of food) and the expenditure of calories (through physical activity and the energy used to maintain processes while resting, such as digestion, breathing, circulation and brain activity), resulting in the surplus energy being stored as body weight.⁶ Physiological factors and genetic factors play a role in increasing obesity, but expert reviews stress that environmental factors – where we live, work, play and travel – are key drivers of the rising rates of obesity worldwide.⁷

2.2 The health implications of obesity

Obesity is a chronic condition with serious implications for health, life expectancy and quality of life.

Overweight and obesity lead to adverse metabolic effects on blood pressure, cholesterol, triglycerides and insulin resistance, and are major risk factors for many chronic, non-communicable diseases (NCDs). The higher a person's BMI, the greater their chance of developing coronary heart disease,⁸ many cancers (including of the breast, colon/rectum, endometrium, kidney, oesophagus and pancreas),⁹ hypertension (a major risk factor for stroke),¹⁰ and type 2 diabetes mellitus.¹¹

Obesity is a chronic condition with serious implications for health, life expectancy and quality of life.

* Body mass index is defined as a person's weight in kilograms divided by the square of his or her height in metres (kg/m²).

A study¹² of 900,000 adults, mostly from Western Europe and North America, found that life expectancy decreased as BMI rose above normal, healthy levels. In class I obesity, median life expectancy was reduced by 2–4 years compared to people of normal weight, and in class III obesity, it was reduced by 8–10 years. This is comparable to the effect of smoking – tobacco use reduces life expectancy by about 10 years.¹³

A further study of almost 1.5 million adults found that there is a correlation between obesity and the rates of death from any cause, showing that the risk of death increases as BMI rises.¹⁴ All-cause mortality among overweight people is 13% greater than among those of normal weight, rising to 44% among class I obesity, 88% in class II obesity – and 150% among the most obese (class III).

But obesity does not just kill: it disables. Having a BMI of 30–35 kg/m² leads to an average of 2.7 years being taken off life lived free from disability for men, and 3.6 years for women. Living with obesity – whether or not it causes actual physical disability – can have a negative impact on quality of life, such as increased levels of depression and anxiety.¹⁵

As overweight and obesity rates have risen over the last few decades, there is evidence that people are increasingly in danger of failing to appreciate that they or their children, are in fact, above a healthy weight. A study in England found that almost 70% of parents of overweight or obese children identified their child as being of ‘normal’ weight.^{15a} Their perception of ‘normal’ is highly misleading, as the serious health implications remain.

2.3 Why obesity should matter to policymakers

Policymakers can no longer ignore the rising levels of obesity: it is having a serious impact on the physical and mental health and wellbeing of populations, and is driving a health and financial crisis that is threatening to overwhelm health systems.

Understanding the extent of obesity,* its impact on health and the consequences for health services and the wider economy, are essential if appropriate action is to be taken.

Costs of obesity

It is hard to calculate the costs of obesity, and estimates vary significantly between countries and between studies, depending on, for example, whether the value of lost productivity (indirect costs of obesity) is included as well as the health-care costs (direct costs). The data are also gathered in different ways, making cross-country comparison difficult. It is notable, however, that not all countries seem regularly to be estimating this cost.

Obesity is driving a health and financial crisis that is threatening to overwhelm health systems.

* Measuring obesity at national level can be problematic, as data are often self-reported rather than objectively measured by a health professional – self-reporting tends to overestimate height and underestimate weight. BMI data also originate from many different sources, meaning that cross-country data are not directly comparable.

Brazil	A 2012 study has estimated that the direct costs of hospitalisations and ambulatory procedures of diseases related to overweight and obesity were almost US\$2.1 billion per year between 2008 and 2010 in Brazil, with approximately 10% (\$200 million) of these costs being attributable to overweight and obesity. ¹⁶ This does not include indirect costs.
Bulgaria	No information has been found on the direct or indirect costs of obesity in Bulgaria.
Canada	<p>Analysis in a Public Health Agency of Canada publication states that the direct and indirect costs of obesity were estimated to cost the Canadian economy approximately Can\$4.6 billion in 2008, up Can\$735 million (about 19%) from Can\$3.9 billion in 2000.¹⁷ However, estimates can vary considerably, with a recent meta-review of cost analyses of obesity in Canada between 1990 and 2011 finding that the aggregated annual costs of obesity during this time were estimated as anywhere between Can\$1.27 billion and Can\$11.08 billion. Of this, direct costs account for 37.2% to 54.5% of the total.¹⁸</p> <p>Between 2.2% and 12.0% of Canada's total health expenditures are estimated as attributable to obesity – and there is a differential in the health costs of overweight and obesity, with the average annual physician cost of overweight men (Can\$427) and women (Can\$578) lower than that of obese men (Can\$475) and women (Can\$682).¹⁹</p>
Denmark	An estimate from 2003 is that 177,703 hospital contacts in Denmark were related to obesity, at a cost of €137.3 million, 2.8% of the running costs at Danish hospitals. ²⁰ This estimate does not, of course, include the indirect costs of obesity.
England / United Kingdom	In the United Kingdom (note: not England), the government's Foresight report estimated spending on obesity in 2007 accounted for 6% of NHS costs – but this could rise to over 13% by 2050. ²¹ When production losses are included, Foresight estimated the costs of obesity to be £15.8 billion in 2007 – and, without action being taken, this could increase to £50 billion by 2050. ²² A study in <i>The Lancet</i> in 2011 estimated that the combined costs of treating obesity-related diseases will increase by £1.9–2 billion a year in the United Kingdom. ²³
France	The costs of obesity in 2002 have been estimated at €2.1–6.2 billion per year; this accounts for between 1.5% and 4.6% of all health expenditure in France. ²⁴ There are no more recent cost estimates for obesity in France.
Germany	The estimated total costs of obesity in 2005 in Germany were €14.1 billion, with €12.3 billion of this being incurred through direct costs. Projections estimate that by 2020 the total cost of obesity will be in excess of €25 billion in Germany. ²⁵
Italy	Estimates of costs of obesity vary. A 2009 study estimated that the annual costs of obesity are €8.3 billion – about 6.7% of public spending in health care, with the costs due largely to cardiovascular disease and diabetes, as well as dieticians and psychologists. ²⁶ Another study estimated the costs as significantly higher: €28.2 billion a year, of which 64% is due to hospitalisations, 12% to diagnostics, 7% on pharmaceutical costs and 11% on other issues – and that by 2025 the costs could increase by 45%. ²⁷
Mexico	The direct costs of obesity (from 13 obesity-related diseases) were estimated to be about \$880 million in 2013. ²⁸ A further study suggests that the costs of obesity are around 0.2% of GDP, and 9% of the total expenditure on health. ²⁹ The estimated indirect cost of lost productivity from premature deaths associated with obesity was more than 25 billion pesos (\$1.9 billion) in 2008, with the potential to reach 73 billion pesos (\$5.6 billion) by 2017. ³⁰
Spain	In Spain, obesity costs were estimated in 2002 to account for about 7% of health-care spending ³¹ – and a new study is being undertaken to estimate the costs more accurately. ³²
United States	In the United States, annual health-care costs for obesity in 2008 were estimated at \$147 billion a year, and people with obesity have medical costs 42% greater than people of normal weight, including 80% more spending on prescription drugs. ³³ A 2011 study in <i>The Lancet</i> estimated that the combined costs of treating obesity-related diseases will increase by \$44–66 billion a year in the United States. ³⁴ A study to quantify medical expenditures and the value of lost productivity (such as absenteeism) estimated the annual cost attributable to obesity among full-time employees in the United States to be \$73.1 billion. ³⁵

2.4 Taking obesity seriously – internationally, regionally and nationally

More people in the world are now overweight than underweight: this is a global crisis demanding global recognition and action. According to the World Health Organization, by 2008 there were 1.5 billion overweight adults (age 20 and older), and of these over 200 million men and nearly 300 million women have obesity³⁶ (in 2010, an estimated 925 million were undernourished³⁷). Estimates vary as to the number of deaths caused each year by obesity,³⁸ but the WHO estimates that around 2.8 million worldwide die each year because of the condition,³⁹ and many more from associated NCDs.

The impact of obesity – and the NCDs for which it is a major risk factor – is increasingly recognised at all levels of government: the WHO's director-general Margaret Chan describes the growth of NCDs as 'a slow-motion catastrophe'.⁴⁰

The national policies of the 11 countries whose policymakers were surveyed – Brazil, Bulgaria, Canada, Denmark, England, France, Germany, Italy, Mexico, Spain and the United States – are dealt with in the country sections below, but in addition:

- Regionally, in 2007, the European Commission published A Strategy for Europe on Nutrition, Overweight and Obesity-related Health Issues,⁴¹ to 'provide guidance for Member States for action in priority areas and key settings'. In 2014, an EU Action Plan on Childhood Obesity 2014–2020⁴² was also produced, to 'demonstrate the shared commitment of EU Member States to addressing childhood obesity, set out priority areas for action and a possible toolbox of measures for consideration and propose ways of collectively keeping track of progress'. Some issues – such as food labelling – are a European-level concern.
- Internationally, NCDs were the focus of a United Nations High-level Meeting on the Prevention and Control of NCDs in 2011. The outcomes document or 'Political Declaration' has a strong focus on prevention of NCDs and obesity, including a call for member states to 'increase and prioritize budgetary allocations for addressing non-communicable disease risk factors and for surveillance, prevention, early detection, and treatment of non-communicable diseases'.⁴³ It also calls for a 'whole-of-government and a whole-of-society effort' to tackling NCDs.
- The World Health Assembly has committed to a 25% relative reduction in the risk of premature mortality from NCDs by 2025. Supporting this is a range of targets that address the major lifestyle risk factors for NCDs – including halting the rise in obesity, and reducing by 10% the prevalence of insufficient physical activity. These are set out in the World Health Organization's Global Action Plan on the Prevention and Control of Non-Communicable Diseases 2013–2020.⁴⁴ The Global Action Plan also echoes the focus of the UN Political Declaration in involving multiple stakeholders, including governments and the private sector, in tackling NCDs and its risk factors.

3. Summaries of obesity realities and policy

	Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?*	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
Brazil	17.4	33.6	51.0	✓✓	✓✓	n/a	✓
Bulgaria	23.7	34.5	58.2	✓✓	✓	n/a	X
Canada	18.4	34.1	52.5	✓✓	✓✓	✓	✓✓
Denmark	14.1	33.3	47.4	✓	✓	n/a	✓✓
England	24.8	37.1	61.9	✓✓	✓✓	n/a	✓✓
France	15.0	32.6	47.6	✓✓	✓✓	n/a	✓✓
Germany	23.6	36.5	60.1	✓✓	✓✓	✓	✓✓
Italy	10.3	36.5	46.8	✓	✓	n/a	✓✓
Mexico	32.2	39.1	71.3	✓	✓	n/a	✓✓
Spain	22.9	39.4	62.3	X	✓✓	n/a	✓✓
United States	35.7	33.1	68.8	✓✓	X	✓	✓✓

For full information and sources for the data provided in this table, please see the individual country summaries.

Please note that the BMI data originate from many different sources – some self-reported (which tends to lead to underestimation of BMI) and some objectively measured by a health professional. This means that cross-country data are not directly comparable.

Key

- ✓✓ Fully in place
- ✓ Partly in place
- X Not in place
- n/a Not applicable

* A single tick indicates that no timescale is given for achievement

3.1 Brazil

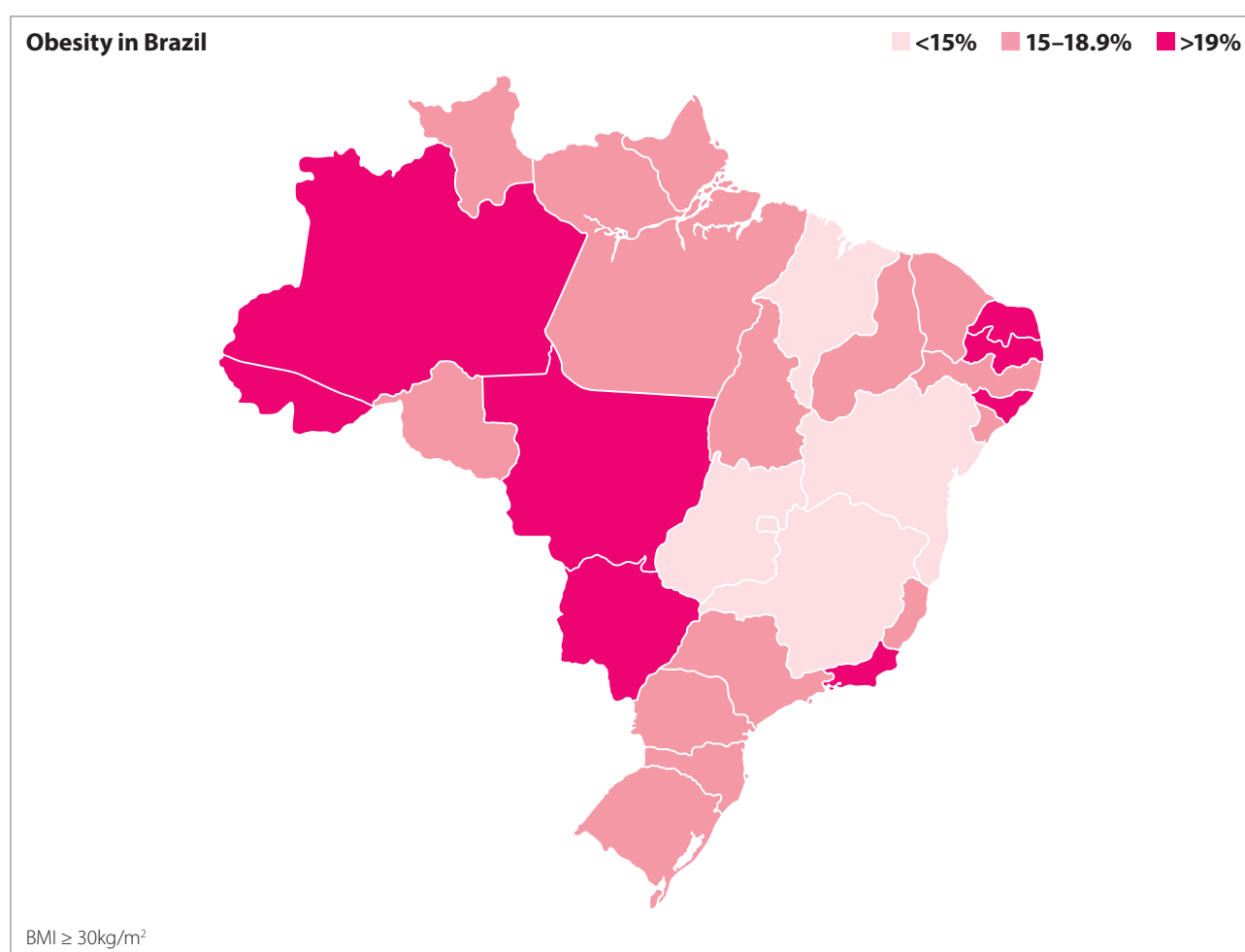
Obesity statistics

In Brazil, 17.4% of adults (16.5% of men and 18.2% of women) are obese, and a further 33.6% (38.0% of men and 29.9% of women) are overweight. 51% of the population have a BMI of 25 kg/m² or over.⁴⁵ These levels have been increasing steadily – in 2006, 10.8% of adults had obesity, and 13.5% by 2009.⁴⁶

Since the 1980s, great strides have been made to reduce malnutrition among Brazilian children, with a drop in prevalence of stunting from 19.9% in 1989 to 6.8% in 2006.⁴⁷ However, these reductions have been accompanied by an increase in overweight and obesity, which has led to a double burden of under- and overweight. One estimate suggests that the prevalence of overweight and obesity in 6–18-year-olds tripled from 4% in the 1970s to 13% by 1997.⁴⁸ More recent estimates, from 2008–9, are that 33.5% of 5–9-year-olds and 20.5% of 10–19-year-olds are overweight or obese.⁴⁹

Obesity rates in Brazil vary significantly by region (see map below) and between socioeconomic groups. This is particularly pronounced among men: in 2008–9, 7.0% of men in the highest income quintile had obesity, and this increases as income falls to 16.9% in the lowest income quintile. This correlation is not seen among women – where there is a very slightly higher proportion with obesity (18.0%) in the middle-income quintiles than in the highest (15.1%) and lowest (16.9%) quintiles.⁵⁰

16.5% of men and 18.2% of women have obesity in Brazil.



Source: Vigitel Brasil (2012).⁵¹

Thanks to Professor Walmir Coutinho for his assistance with compiling this country information.

Obesity policy

Obesity has been a significant policy area in Brazil since the publication of the National Food and Nutrition Policy in 1999. In 2011, a comprehensive national and interdepartmental plan was developed to prevent and control obesity and confront the social and environmental causes of the epidemic.⁵² The plan's objectives are to improve food consumption patterns, increase the availability of healthy food, promote the use of public transport, promote sustainable habits and lifestyles, and provide comprehensive health care for people with overweight and obesity.⁵³

Obesity is also an important driving force behind other policies, notably the Strategic Action Plan to Tackle NCDs 2011–2022. This Plan includes health surveillance and again promotes healthy eating and physical activity.⁵⁴ In 2012 a framework on dietary and nutrition education was established to support different government departments in nutrition advice.⁵⁵

Childhood obesity is a particular focus, with a school lunch programme (one of the largest in the world) that since 2009 has included a stipulation that 30% of the programme's budget should be spent on the purchase of fresh foods directly from family farms and cooperatives.⁵⁶ However, an attempt in 2006 to regulate advertising of foods high in fat, sugar and salt was suspended following a challenge in the courts by the food industry.⁵⁷

Physical activity is also promoted, including a Health Academy (Academia da Saúde) programme, launched in 2011, which will offer free-of-charge physical activity classes in 4,000 community settings by 2015. The programme is integrated with primary care, and saw a \$150 million investment in its first year.⁵⁸ The Agita São Paulo programme has been running since 1996 to increase physical-activity participation, targeting the whole population but particularly children and students, workers and older adults, and which has now been broadened out into the Agita Mundo ('Move the World') movement across the country and more widely.⁵⁹

People with obesity and overweight are offered guidance in primary-care health settings, including group monitoring and health-promotion activities, and individuals are given realistic goals to meet.⁶⁰ Currently in Brazil there are two types of obesity drugs available (sibutramine and orlistat), but these are not covered by the unified health system.

Surgery for obesity has been covered by the Brazilian Unified Health System since 1999. Bariatric surgery is offered to those who have a BMI of 40 kg/m² or over or for those with a BMI of 35 kg/m² or over who have comorbidities and who have not responded well to other obesity treatments.⁶¹ There is growing demand for surgery, increasing six-fold from 2000 to 2006.⁶² In 2010, 60,000 bariatric surgeries were performed in Brazil, 35% of which were laparoscopic and non-invasive.⁶³

Obesity targets

There are national targets on both adult and childhood obesity,⁶⁴ to:

- reduce childhood obesity to 1998 levels by 2022– 8% for boys aged 5–9, 3% for boys aged 10–19 and 2.7% for girls aged 10–19;
- stabilise obesity in the adult population – keeping the level at 15%; and
- stabilise overweight and obesity in the adult population – keeping the level at 48%.

Currently the obesity and overweight figures for both adults and children remain on an upwards trajectory.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
17.4	33.6	51.0	✓✓	✓✓	n/a	✓

3.2 Bulgaria

Obesity statistics

The WHO estimates that, in 2008, 23.1% of men and 24.3% of women in Bulgaria had obesity, and a further 40% of men and 28.9% of women are overweight. 58.8% of the Bulgarian adult population have a BMI of 25 kg/m² or over.⁶⁵

According to the 2011 National Survey of Nutritional Status of Schoolchildren, obesity and overweight are most prevalent in younger children. Among children aged 6–9, obesity prevalence was estimated to be 17.8% with a further 35.7% overweight. Among 14–18-year-olds, obesity prevalence is 8% and overweight 24.1%.⁶⁶

NOTE: Data are not available to show regional variations in obesity in Bulgaria.

**23.1% of men and
24.1% of women
have obesity in
Bulgaria.**

Obesity policy

Bulgaria does not have a dedicated obesity strategy. However, following a multi-sectoral consultation process, a National Food and Nutrition Plan 2005–2010⁶⁷ was adopted in August 2005. It covers three strategic areas – nutrition, food safety and food security – and aims to involve the private sector and NGOs. It includes activities aimed at people of low socioeconomic status, and initiatives include the development of new standards on labelling the nutrition content of food, better training on nutrition-related issues for health professionals, and incentives to encourage production and sale of healthier food options.⁶⁸ The Plan was evaluated in 2004, but subsequent evaluations failed to come to fruition due to a lack of funds.⁶⁹ The 2004 evaluation shows that rates of overweight and obesity have continued to rise from 1998 levels despite efforts to hinder this growth.⁷⁰

This Plan has now been superseded by the National Program for Prevention of Chronic Non-Communicable Diseases 2014–2020, adopted in 2013 and funded by the Ministry of Health,⁷¹ which aims to improve public health and enhance quality of life by reducing premature mortality, morbidity and health consequences of major NCDs that are associated with risk factors including unhealthy diet and low physical activity. It sets out a number of targets related to obesity, diet and physical activity (see p.12 below).

A Framework for Responsible Commercial Communication of Food and Drinks was developed in 2010 by the National Council for Self-regulation, setting out guidance on appropriate food and drink advertising aimed at children (the Framework does not, however, restrict the times at which advertisements of unhealthy foods can be shown).⁷² There are also national initiatives to promote physical activity in children and adolescents, such as Sport at School (2006),⁷³ and since 2009 there has been regulation on healthy nutrition in schools, including weekly menus for school catering and canteens.⁷⁴

Clinical guidelines for the treatment and management of obesity in Bulgaria are unavailable as of April 2014.

Obesity targets

The National Program for Prevention of Chronic Non-communicable Diseases 2014–2020 includes two targets specifically on obesity:

- stop the increase in adult obesity; and
- maintain the lack of increase in the proportion of children with obesity.⁷⁵

In addition, there are targets on physical activity and on reducing trans-fats and salt.⁷⁶ These targets are all to be achieved by 2020.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
23.7	34.5	58.2	✓✓	✓	n/a	X

3.3 Canada

Obesity statistics

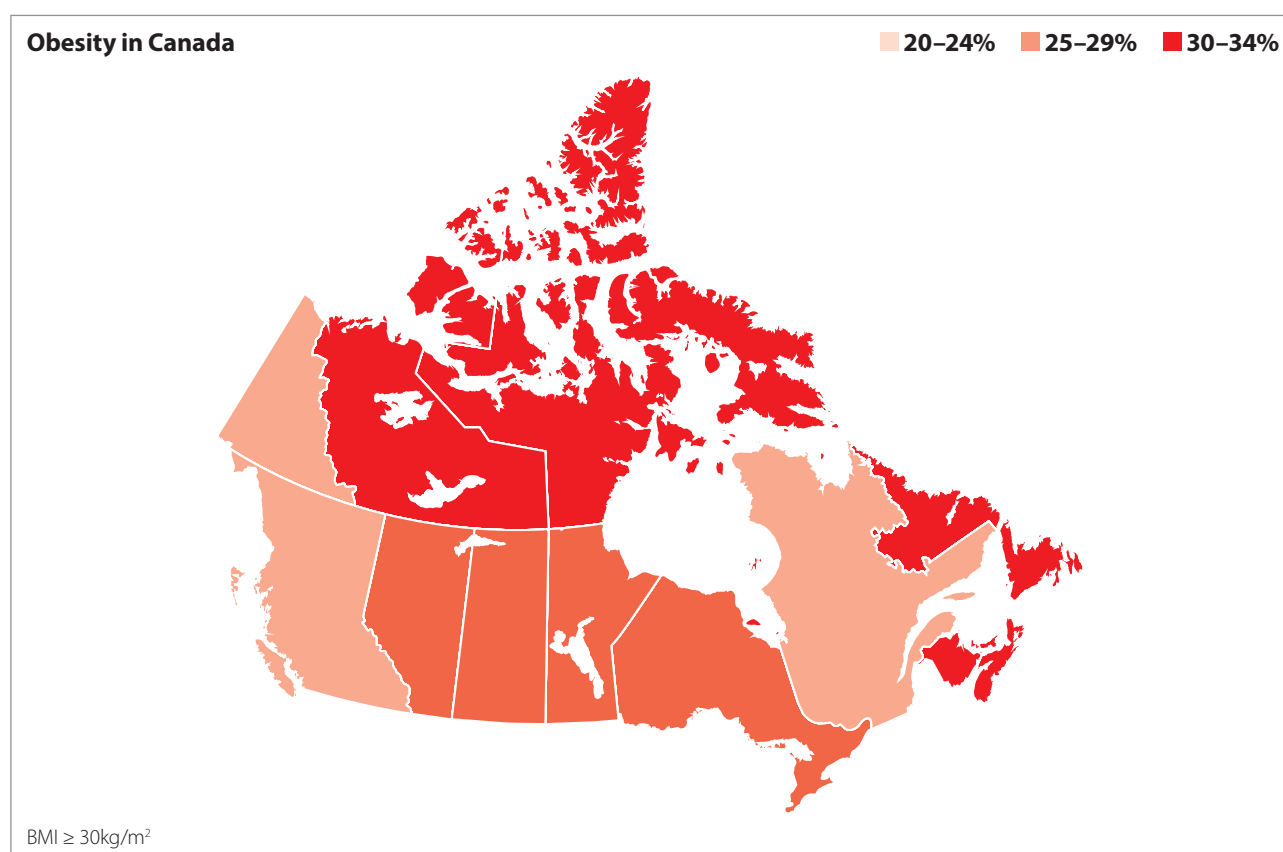
In just seven years, between 2005 and 2012, obesity in Canada among men has risen from 16.9% to 18.7% and from 14.7% to 18.0% among women.⁷⁷ 59.9% of men and 45% of women are currently overweight or obese.⁷⁸

Rates of obesity and overweight among children aged five to 17 currently stand at 19.8% overweight and a further 11.7% obese – a combined total of 31.5%.⁷⁹ Aboriginal children are at high risk of obesity: as early as 2004, a Public Health Agency of Canada report suggested that the combined rate of overweight and obesity in this group was as high as 41%.⁸⁰

A report in metropolitan areas in 2005–2008 found significant differences in obesity rates between groups with high and low socioeconomic status (SES) – for example, obesity rates were 8.3% among high SES groups and 16.5% among low SES groups in Calgary, Alberta⁸¹ – and there is also an inverse pattern of education status and obesity.⁸²

There are also differences in overweight and obesity among different ethnic groups amongst the adult population – for example, obesity rates are significantly higher in Aboriginal populations: 25.7% of Aboriginal adults (excluding First Nations on-reserve) were estimated to be obese in 2007/8.⁸³

18.7% of men and 18.0% of women have obesity in Canada.



Source: Gotay et al. (2013).⁸⁴

Obesity policy

Canada does not have a specific national obesity policy, but since 2005 has had an Integrated Pan-Canadian Healthy Living Strategy,⁸⁵ which has been adopted in every province except

Thanks to Ximena Ramos Salas, Dr Diane Finegood and Lee Johnston for their assistance with compiling this country information.

Quebec (which has its own action plan on the promotion of healthy lifestyles 2006–12⁸⁶). The Strategy was strengthened in 2009 and its goals are to improve overall health outcomes and reduce health disparities, and it aimed to facilitate greater alignment, coordination and direction between sectors, in addressing risk factors. It also gave a national context and reference point to measure the success of strategies and interventions. The most recent progress report was published in 2008, and indicated that – at that stage – progress to improve physical activity and increase the proportion of people in the ‘healthy’ BMI category was not being achieved.⁸⁷

In 2010, Federal, Provincial and Territorial Ministers of Health agreed to focus efforts on curbing childhood obesity and promoting healthy weights. They developed a framework to work together and with stakeholders to identify joint and complementary actions,⁸⁸ key priorities in which are:

- making the environments where children live, learn and play more supportive of physical activity and healthy eating;
- identifying the risk of obesity in children and addressing it early; and
- increasing the availability and accessibility of nutritious foods and decreasing the marketing to children of foods and beverages that are high in fat, sugar or sodium.

Province-level programmes also exist to address the risk factors for obesity. In Ontario in 2012, for example, partnership was signposted as the way to achieve success, and in 2013 a panel of experts produced a set of recommendations aimed at reducing overweight and obesity. These recommendations included starting children on the right path from the earliest point, changing the food environment, and creating healthy communities by using social marketing to promote healthy lifestyles and improving access to weight-management programmes.⁸⁹

Pharmacological and surgical options are offered for certain patients with high BMI, funded by the public health service. Clinical guidelines on obesity were established in 2006,⁹⁰ suggesting that pharmacological intervention be used when BMI is 27 kg/m² or over and comorbidities are present, or when BMI is 30 kg/m² or over. Bariatric surgery is recommended only when BMI is of 40 kg/m² or over (or 35 kg/m² or over with comorbidities).

The guidelines also suggest that patients should be screened for obesity and, if BMI is over 25 kg/m², GPs should check for comorbidities, and that they should be provided with goals and a lifestyle modification programme for weight loss and reduction of the risk factors.⁹¹

Obesity targets

The Pan-Canadian Healthy Living Strategy included an obesity-related target to be achieved by 2015:

- to increase the proportion of Canadians who are at a ‘normal’ body weight, as defined by a BMI of between 18.5 and 24.9 kg/m², by 20%.

The Strategy also aimed to increase the proportion of Canadians who make healthy food choices by 20%, and to increase the proportion of Canadians taking 30 minutes or more of moderate to vigorous physical activity regularly by 20%.

There are also examples of provincial-level obesity targets – for example, Quebec’s action plan 2006–12 aimed to reduce the prevalence of obesity among youths and adults by 2% and the prevalence of overweight by 5% – but these seem largely to have been missed.⁹² Public Health Ontario committed to reducing the childhood obesity burden by 20% over the following five years.⁹³

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
18.4	34.1	52.5	✓✓	✓✓	✓	✓✓

3.4 Denmark

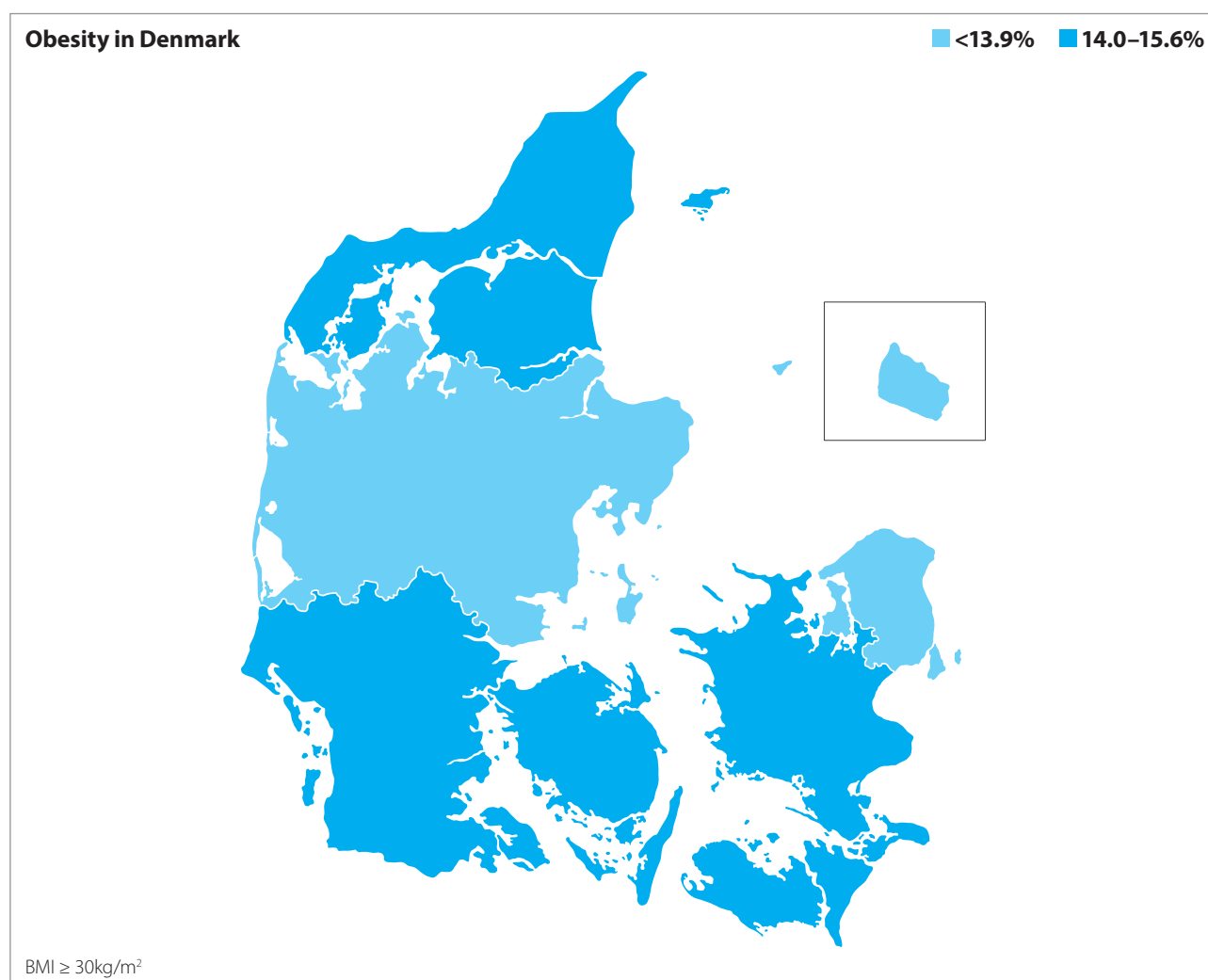
Obesity statistics

In Denmark, 14.3% of Danish men and 14.0% of Danish women have obesity (an average of 14.1%).⁹⁴ A further 40% of men and 26.7% of women are overweight (an average of 33.3%).⁹⁵ WHO projections suggest that, by 2030, 27% of men and 26% of women could have obesity.⁹⁶

Childhood obesity and overweight appears to have plateaued in the period 1998–2011 among infants, children and adolescents.⁹⁷ Estimates vary – among adolescents, for example, the prevalence of overweight varied between 9.9% and 18.5% and obesity between 1.9% and 4.4% – but there is thought to be a ‘tendency to a levelling off or even a decline in the prevalence rates for overweight and obesity in the period from 2002 to 2010’.⁹⁸

As in other countries in the survey, there are differences in obesity according to social determinants: 22.7% of those with only primary-school education had obesity, compared with just 7.2% of those with a higher education⁹⁹ and 12.9% of the employed population and 19.1% of the unemployed population had obesity.¹⁰⁰ The level of education of parents can also have significant effects on the prevalence of overweight and obesity in children; boys and girls with parents who had a low education level show higher rates of overweight than their peers from more educated families.¹⁰¹

**14.3% of men and
14.0% of women
have obesity in
Denmark.**



Source: Sundhedsstyrelsen (2010)¹⁰²

Thanks to Dr Jens Bruun and Professor Morten Grønbaek for their assistance with compiling this country information.

Obesity policy

In 2002 the third national health plan – Healthy Throughout Life 2002–2010¹⁰³ – was established by multiple government agencies to tackle the risk factors for non-communicable disease, including obesity, poor diet and lack of physical activity.¹⁰⁴ This was followed in 2009 by the Danish Government launching the ‘Health Package 2009’, which also focuses on the risk factors.¹⁰⁵

A National Action Plan Against Obesity was published in 2003,¹⁰⁶ with overall objectives to: ‘prevent more persons from developing BMI ≥ 30 and to reduce body weight among persons with BMI ≥ 30 ’.¹⁰⁷ It encourages action at all levels – individual, community and the private and public sectors. Denmark is also part of the Nordic Cooperation and is involved in implementing the Nordic Plan of Action on Better Health,¹⁰⁸ this Plan concentrates on the promotion of physical activity and diet in the five Nordic countries. This Plan has goals to be met by 2021 (see below).

There have been a number of obesity-related policies introduced, including the use of the ‘Keyhole Nordic food labelling system’ (introduced in 2009).¹⁰⁹ Advertising of foods to children is not regulated by the Danish government, but an industry Forum of Responsible Food Marketing Communication has developed a code of responsible food marketing to children.¹¹⁰

Most notably, in 2011 a tax on foods containing saturated fat (dairy and vegetable oil) was introduced, putting a surcharge on high-fat food of 16 kroner per kilogram of saturated fats, raising the price of whole milk by about 6% and the price of imported butter by over a third. Its aim was to discourage intake of unhealthy foods, and it was projected that it could reduce the risk of heart disease by 5% – but it led to increases in administrative costs for companies and the threat of job losses. It was very unpopular with consumers, and was repealed after just a year.¹¹¹

There are guidelines on the use and reimbursement of Xenical – it is available if the individual has a BMI of over 27 kg/m² and existing comorbidities, has not responded well to a previous weight-management programme that did not use pharmacological treatment (i.e. lost less than 5% of body weight in three months), and has had obvious weight loss after four weeks of taking the drug.¹¹² Guidelines for bariatric surgery also exist and specify that the patient must have a BMI of over 50 kg/m² to be eligible (or a BMI of over 35 kg/m² with comorbidities present).¹¹³

Obesity targets

The Healthy Throughout Life 2002–2010 Plan included a single obesity goal, to:

- stop the increase in the number of people who are obese.

In addition, it calls for:

- a significant increase in the number of Danes who eat healthily and make such diets a natural part of everyday life; and
- an increase in the number of people who partake in physical activity regularly.

However, no quantified targets were set, with no timeline for their achievement in this Plan. The Nordic Plan of Action includes goals and visions to move the countries towards a healthier lifestyle; the goals do not have measurable targets, but the visions are quantifiable. There is one vision for obesity specifically:

- to reduce the number of overweight and obese adults by 30% and the number of overweight and obese children by 50% from 2006 estimates by 2021.¹¹⁴

There are also targets on physical activity levels and on healthy diets. These targets are also to be achieved by 2021.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
14.1	33.3	47.4	✓	✓	n/a	✓✓

3.5 England

Obesity: statistics

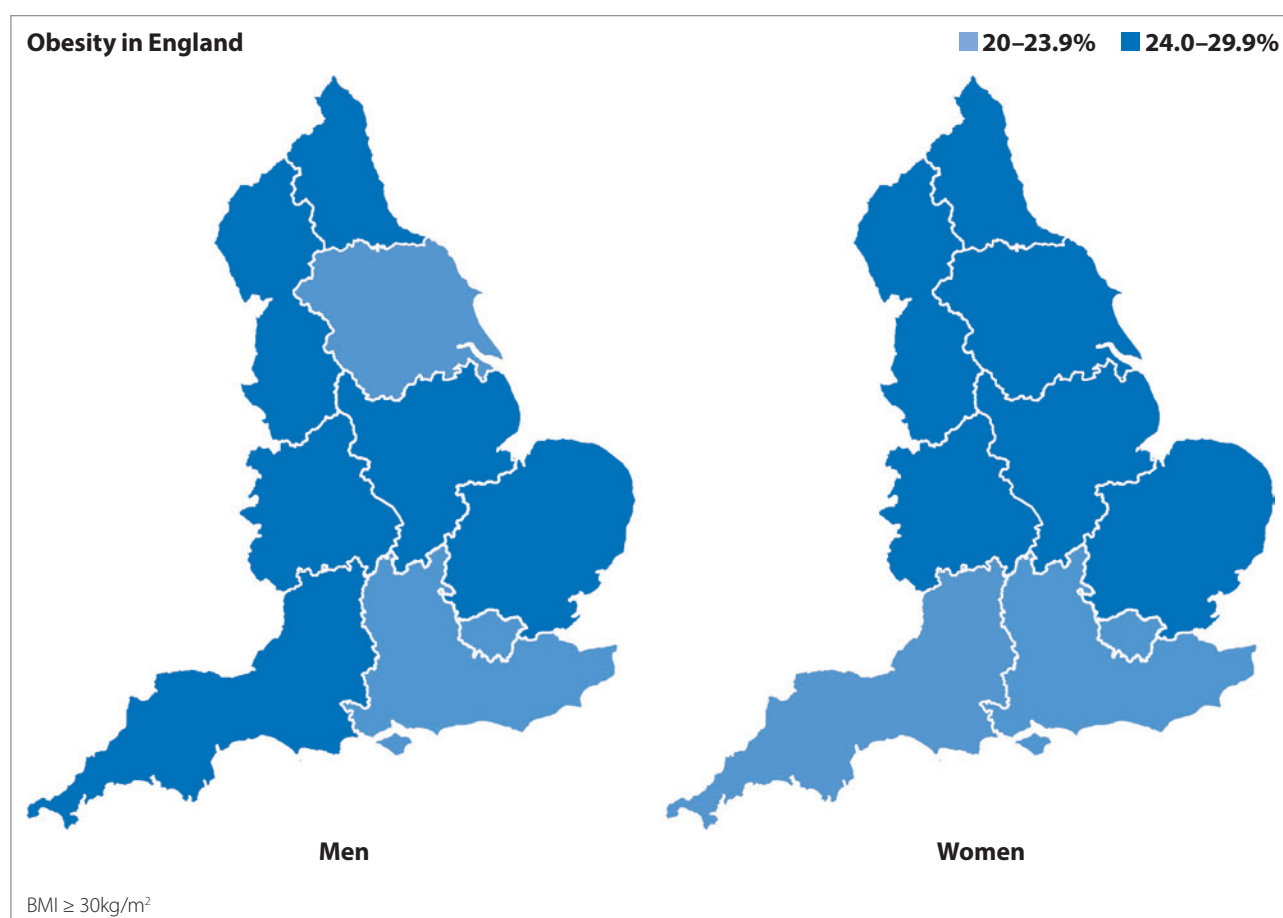
Obesity has risen from 7% among men and 12% among women in England in 1986–7¹¹⁵ to 13.2% and 16.4% respectively by 1993,¹¹⁶ and 24.4% and 25.1% respectively by 2012.¹¹⁷

66.6% of men and 57.2% of women are currently overweight or obese.¹¹⁸

Between 1995 and 2004, obesity among boys in England rose from 11.1% to 19.4%, but then fell steadily to 14.0% by 2012; among girls, the rise was from 12.2% to 18.8% and the fall has been to 13.5%.¹¹⁹ Overweight in 2012 was 13.9% for boys and 14.6% for girls.¹²⁰

The obesity rate among women in the lowest-earning households is 31%, compared with 19% in the highest-earning; among men, there is little difference.¹²¹

24.4% of men and 25.1% of women have obesity in England.



Source: Public Health England (2014).¹²²

Obesity policy

Policies and actions to tackle obesity occur both at the level of the United Kingdom as a whole, and also at the level of devolved government – for example, setting national nutrition standards in schools has occurred at the devolved region level, but interventions to restrict the advertising of food high in salt, sugar and fat to children have been at the UK level.

The main obesity policy in England is Healthy People, Healthy Lives: A Cross-government Strategy for England, which was published in 2008,¹²³ and this was followed in 2011 by Healthy Lives, Healthy People: A Call to Action on Obesity in England.¹²⁴ Local as well as national

government has a key role to play, particularly since the responsibility for public health was given to directors of public health under local-authority control in 2013,¹²⁵ with oversight by a new body, Public Health England.

Obesity policy has been backed up by a healthy lifestyles campaign, Change4Life, which focuses particularly on prevention of obesity. There are also policies in place that are concerned with reducing child obesity – such as the Healthy Child Programme.¹²⁶ In 2010, responsibility for nutrition policy was shifted from the Food Standards Agency to the Department of Health, and the government has been working with industry in a Public Health Responsibility Deal to address issues including obesity.¹²⁷

An Obesity Review Group has also been established, which provides input into policy development.¹²⁸ It is chaired by the public health minister, and brings together academics, NGOs, public health professionals and industry, 'to take stock of progress in meeting the national ambitions and to consider what more needs to be done'.

Access to obesity drugs and surgery on the National Health Service is driven by the guidance of the National Institute of Health and Care Excellence (NICE). NICE Guidelines suggest two possible drug treatments. The first is metformin, which is not authorised for use in a non-diabetic population, so this use is 'off-label' and informed consent must be obtained.¹²⁹ Alternatively, orlistat can be prescribed for people with a BMI over 28 kg/m² with associated risk factors (such as high blood pressure), or a BMI of 30 kg/m² or more, and only continued beyond three months if the person loses at least 5% of their body weight since starting the treatment.¹³⁰

NICE Guidance recommends that adults should only be referred for consultation for bariatric surgery if they have a BMI over 40 kg/m² (or between 35 and 40 kg/m² but with another significant condition that would benefit from weight loss), and if 'all non-surgical measures have been tried, but have failed to achieve or maintain adequate, clinically beneficial weight loss for at least 6 months'.¹³¹

Obesity targets

The 2011 Call to Action sets two new obesity-related 'ambitions'¹³²:

- sustained downward trend in the level of excess weight in children by 2020; and
- a downward trend in the level of excess weight averaged across all adults by 2020.

This will be challenging – although there are some recent signs that obesity trends may be beginning to flatten out (but not decline), among both adults¹³³ and particularly children¹³⁴ (see p.17 above).

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
24.8	37.1	61.9	✓✓	✓✓	n/a	✓✓

3.6 France

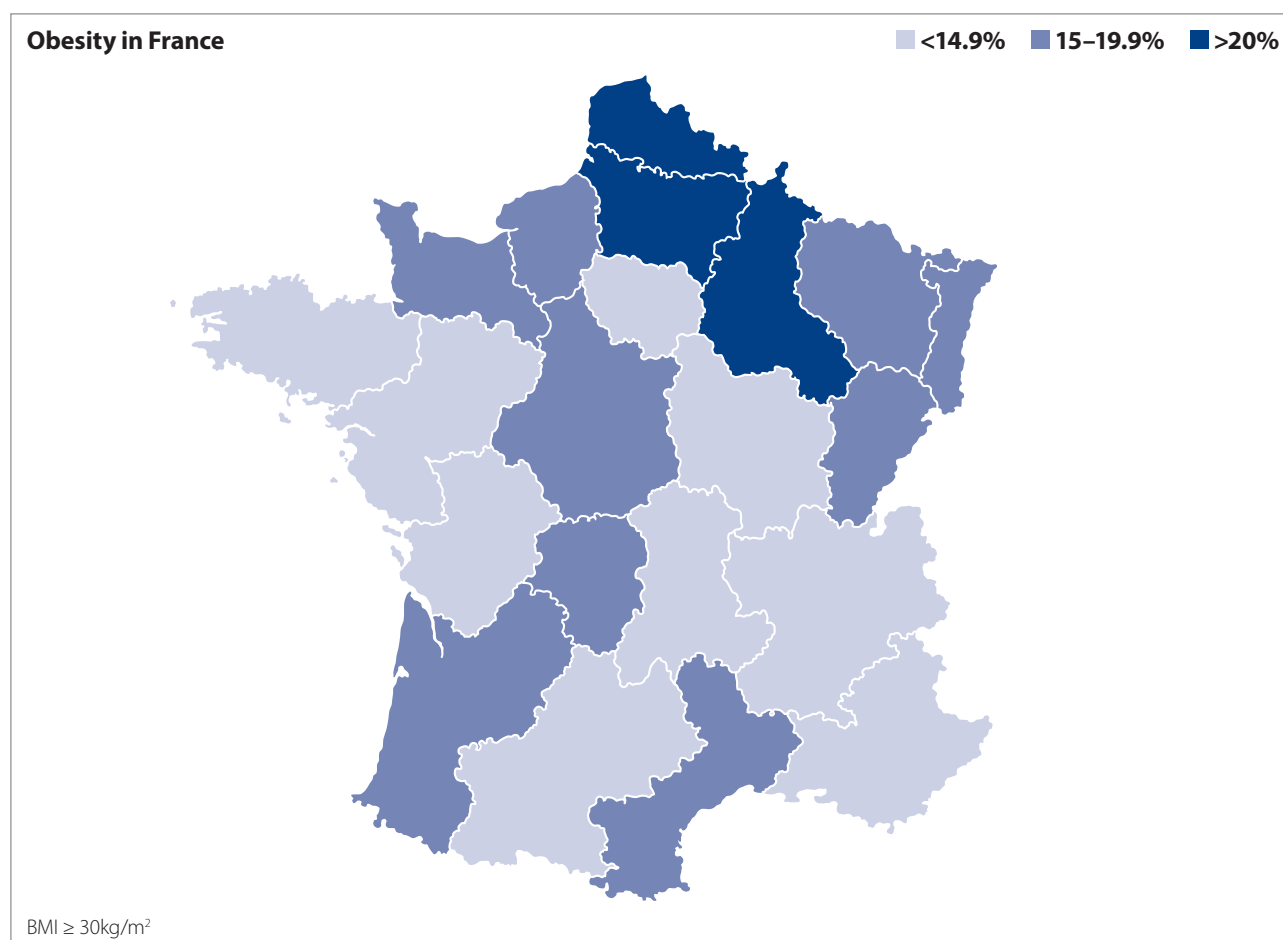
Obesity statistics

Compared to many of the countries in this survey, France has a low obesity rate. In 2012, 14.3% of men and 15.7% of women in France were estimated to have obesity, with a further 38.8% of men and 26.3% of women with overweight.¹³⁵ However, prevalence is increasing, with obesity projected by the OECD to grow by 2% and overweight by 5% between 2010 and 2020.¹³⁶

Among children, obesity rates are also relatively low, and have not risen over the past 20 years.¹³⁷ More boys than girls are overweight – in 2009–10 18% of boys and 13% of girls were overweight.¹³⁸ Child obesity rates remain below 10%,¹³⁹ and evidence suggests rates have decreased over the past few years. In 1999, the obesity rates in children aged 3–14 years was 3.5% and this dropped to 2.9% by 2006.¹⁴⁰

As in many other countries, there is a negative correlation between socioeconomic status/education level and obesity. Estimates suggest that, although obesity had risen in the preceding decades for all levels of education and across the socioeconomic spectrum, women with poor education in France are almost three times more likely to be overweight than more educated women. This also holds true for men (which it does not in most OECD countries): poorly educated men are 1.6 times more likely to be overweight than those with a better education.¹⁴¹ In addition, children in the most disadvantaged socioeconomic groups are over twice as likely to be obese as children who are better off.¹⁴²

14.3% of men and 15.7% of women have obesity in France.



Source: OpEpi (2012).¹⁴³

Thanks to Professor Olivier Ziegler, Professor Arnaud Basdevant and Professor Serge Hercberg for their assistance with compiling this country information.

Obesity policy

France's first national programme to address food behaviour and physical activity was launched in 2001, with the aim of stabilising obesity prevalence among adults and reducing obesity among children.¹⁴⁴ The second National Nutrition and Health Programme¹⁴⁵ led to the introduction of a charter in 2009 by the Ministry of Health and the Ministry of Culture and Communication to promote healthy diet and physical activity in TV programmes and advertisements.¹⁴⁶

The most recent plan is the National Nutrition and Health Programme 2011–2015, a multisectoral effort involving nine ministries and partners across a range of sectors.¹⁴⁷ Its four main objectives are to reduce obesity and overweight, increase physical activity, improve eating habits (especially in high-risk groups – health inequalities among lower socioeconomic groups is a particular focus) and reduce the prevalence of nutrition-related health conditions. The programme includes a focus on data surveillance and evaluation, and a series of targets (see below).

In addition, a French Obesity Plan ran from 2010–2013¹⁴⁸ and focused on prevention of obesity, delivery of health care for people with obesity, tackling discrimination, and increasing research. The Plan was due to end in 2013, although many of the various measures and programmes are still in place, or in development.

France has a national health system, which provides treatment of obesity when patients meet appropriate criteria, but the Obesity Plan highlighted the need for more up-to-date guidelines on the screening, management and treatment of obesity.

There are, however, clinical guidelines on first-line medical management of obesity,¹⁴⁹ as well as on bariatric surgery.¹⁵⁰ The French Ministry of Health does not recommend the use of drug therapies (specifically orlistat) to treat obesity in the first instance; they suggest a combination of education, advice, psychological approaches (if necessary) and follow-ups with a doctor as the best approach. To be eligible for bariatric surgery the individual must have a BMI of 40 kg/m² or over, or a BMI of 35 kg/m² or over and have at least one comorbidity that would be improved with such surgery; have undergone 6–12 months of unsuccessful attempts to lose weight by other means; be well-informed of the surgery and all risks attached; and have accepted the need for future lifelong consultations and assessments following the surgery.¹⁵¹

Obesity targets

France has a wide range of targets on obesity and obesity-related issues. The National Nutrition and Health Programme 2011–2015 sets out targets across its four main objectives (see above), which are to be achieved within five years. For example, in the area of obesity the targets are to:

- stabilise the prevalence of obesity among adults;
- reduce by at least 10% the prevalence of overweight among adults;
- stabilise the prevalence of obesity among women living in poverty; and
- reduce by at least 15% the prevalence of morbid obesity.¹⁵²

There is also a target to reduce by an average of 15% the overall prevalence of overweight and obesity among children and adolescents aged 3 to 17, including among children from disadvantaged homes. Other targets relevant to obesity include increasing fruit and vegetable consumption and reducing sugar-sweetened drink consumption among children.¹⁵³

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
15.0	32.6	47.6	✓✓	✓✓	n/a	✓✓

3.7 Germany

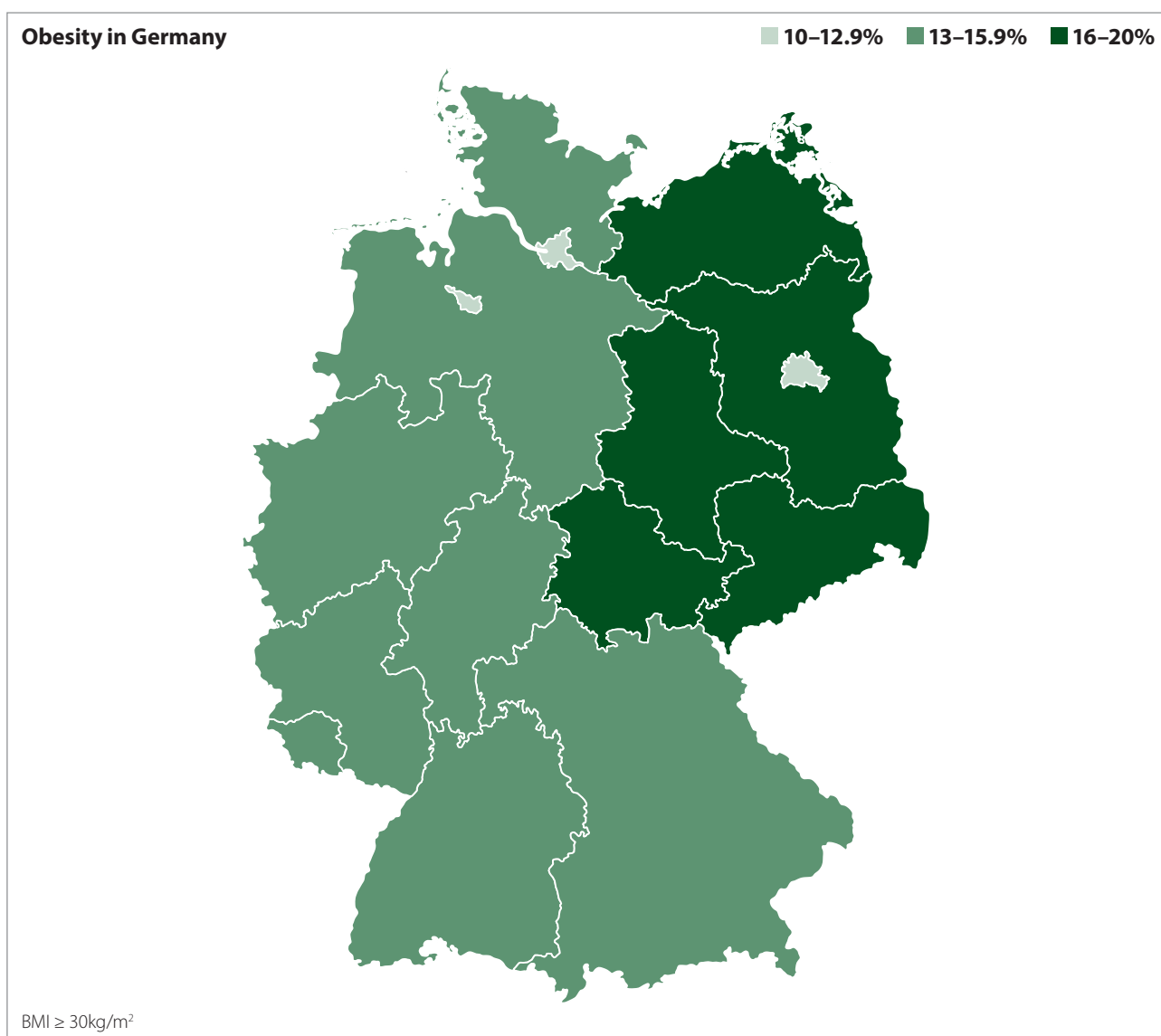
Obesity statistics

In 2009–11, 23.3% of men in Germany were estimated to be obese, with 43.8% overweight, and 23.9% of women were obese, with 29.1% overweight. The combined rate of overweight and obesity is much higher among men (67.1%) than among women (53.0%), although obesity rates remain similar.¹⁵⁴

Among 3–17-year-olds, obesity prevalence in 2007 was 6.3%, with a further 15% overweight.¹⁵⁵

There is an economic gradient evident in obesity in Germany, with prevalence of obesity and overweight among higher-income groups being below that of lower-income groups. This is particularly pronounced among women – for example, among women aged 30–44 in low-income groups, obesity prevalence is 32.6%, whereas it is just 7.2% among that age range in the high-income group.¹⁵⁶

23.3% of men and 23.9% of women have obesity in Germany.



Source: German Federal Statistical Office (2009).¹⁵⁷

Obesity policy

In 2008, the federal government launched a cross-sectoral National Action Plan for the Prevention of Poor Dietary Habits, Lack of Physical Activity, Overweight and Related Diseases, known as IN FORM (the German national initiative to promote healthy diets and physical activity).¹⁵⁸ This has five main areas for action: the Federal Government, federal states and communes 'set an example'; information on diet, physical activity and health; physical activity in daily life; improving the quality of away-from-home catering; and fresh impetus for research.

There are a number of policies that support anti-obesity efforts. The German Platform for Diet and Physical Activity, founded in September 2004, brings government representatives together with around 100 stakeholders (including the food industry, food producers, researchers, health insurers, sports unions and government representatives) to promote a number of programmes, with support from an expert scientific committee.¹⁵⁹ Gut Drauf ('feel good'), a federal initiative established in 1992, works with children and adolescents on diet, exercise and stress-management, and is run through regional networks.¹⁶⁰ There is a National Cycling Plan 2020, which builds on a National Cycling Plan 2002–2012, taking it beyond promotion of cycling alone and including 'ecomobility' – the use of public transport and walking as well as cycling.¹⁶¹ The Plan is particularly aimed at federal states and local communities, where responsibility for delivery of transport policy lies.

Guidelines indicate that pharmacological treatment of obesity is available for patients with a BMI of 30 kg/m² or over (or 27 kg/m² or over with comorbidities) who have not achieved satisfactory weight loss through other means, and therapy should continue only if weight loss of at least 2kg is achieved in the first four weeks.¹⁶²

Germany's clinical guidelines on the management and treatment of obesity recommend bariatric surgery for patients with BMI of 40 kg/m² or over, or patients with BMI of 35 kg/m² or over and one or more comorbidities. Before treatment, patients must have a restricted, low-calorie diet, take part in psychotherapy and group therapy (where possible), and get two hours a week of physical activity.¹⁶³ If these criteria are fulfilled, bariatric surgery is mostly covered by health insurance.

Obesity targets

In 2008, the German government established a set of key indicators for sustainable development (updated in 2012), section 14 of which deals with 'health and nutrition', and contains a target on obesity:

- to reduce the proportion of adults with obesity by 2020.¹⁶⁴

This is reported on every two years, most recently in 2012.¹⁶⁵

In addition, IN FORM states that, by 2020, the aim is that:

- adults lead healthier lives, children grow up more healthily and enjoy a better quality of life as well as improved performance in education, professional and private life; and
- the diseases caused by an unhealthy lifestyle, a one-sided diet and a sedentary lifestyle be markedly reduced.¹⁶⁶

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
23.6	36.5	60.1	✓✓	✓✓	✓	✓✓

3.8 Italy

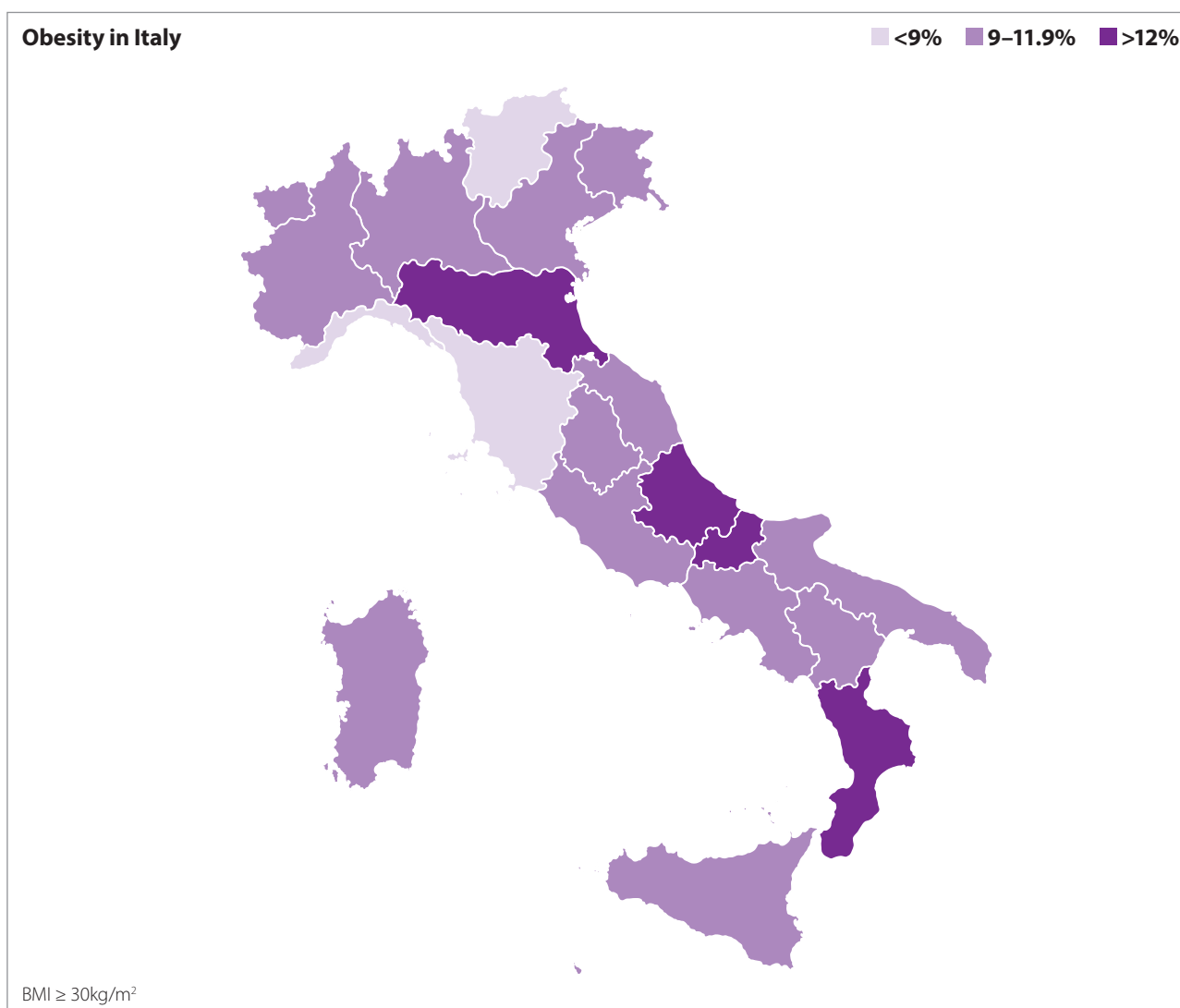
Obesity statistics

In 2009, 11.3% of men had obesity, with a further 45.2% overweight; 9.3% of women had obesity, and a further 27.7% overweight. In total, 46.8% of the adult population is above a healthy weight, up from 38.5% in 1990.¹⁶⁷

Although adult obesity in Italy is the lowest of all the countries included in this survey, and one of the lowest in the OECD, rates of child obesity are among the highest in Europe: in 2010, 11.1% of children had obesity, with a further 22.9% overweight.¹⁶⁸ There are big variations between region – in Calabria 49% of children are overweight or obese, compared with 15% in Bolzano.¹⁶⁹

There is a correlation of level of education with obesity in Italy, with 6.5% of adults with a higher diploma having obesity compared to 16.8% of adults with just an elementary school education.¹⁷⁰ As in many other countries in this survey, these disparities in obesity are most pronounced among women – poorly educated women are three times more likely to be overweight than their more educated peers.¹⁷¹

11.3% of men and 9.3% of women have obesity in Italy.



Source: ISTAT (2010).¹⁷²

Thanks to Professor Enzo Nisoli, Dr Luca Busetto, Maddalena Redini and Michela Nardi for their assistance with compiling this country information.

Obesity policy

Italy does not have a plan specifically to tackle obesity, but obesity is noted in the National Prevention Plan 2010–2012,¹⁷³ which concentrates on the prevention of non-communicable diseases and the promotion of healthy lifestyles. The Plan suggests that obesity should be addressed through promoting breastfeeding, partnering with schools to increase physical activity, improving the food at schools and workplaces, and increasing the consumption of fruit and vegetables in the general population. As of April 2014, the Plan has not been updated. There are regional initiatives and plans also; Campania has a Regional Prevention Plan 2010–2012, which sets out goals to improve the knowledge of obesity-related illness and metabolic disorders amongst the general population. It also aims to increase the number of people screened and thus being identified as obese or overweight, so appropriate management can be offered.¹⁷⁴

There are national intervention programmes in Italy focused on obesity and implementing the National Prevention Plan, notably the Let's Go...With Fruit scheme (in five regions of the country) to increase fruit and vegetable consumption in schools and workplaces, analysis of which suggests that consumption has significantly increased.¹⁷⁵ The scheme has a multisectoral approach and is run jointly by the Ministry of Health and the Ministry of Education; children in both primary and secondary schools are educated about eating a healthy diet and are provided with the means to do so by the programme.¹⁷⁶

Italy has a national health service that provides universal health coverage, and there are guidelines on the treatment of obesity.¹⁷⁷ Orlistat is available as a treatment option for people with a BMI over 30 kg/m² (or over 28 kg/m² with comorbidities) when lifestyle changes and counselling have not been effective. The treatment should only be continued over three months if the patient has lost at least 5% of their original weight in that time.¹⁷⁸ Bariatric surgery is offered to adults with a BMI of 40 kg/m² or over (or over 35 kg/m² with comorbidities), and only when previous efforts to lose weight have failed.¹⁷⁹

Obesity targets

The National Prevention Plan 2010–2012 included a target to reduce obesity by 10% (particularly focusing on a reduction in child obesity).¹⁸⁰ No timescale is given for this reduction and no more detailed targets are specified.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
10.3	36.5	46.8	✓	✓	n/a	✓✓

3.9 Mexico

Obesity statistics

In 2000, 19.2% of men and 28.6% of women in Mexico had obesity.¹⁸¹ By 2012 this had risen to 26.9% of men and 37.5% of women.¹⁸² A further 42.6% of men and 35.5% of women are overweight.¹⁸³

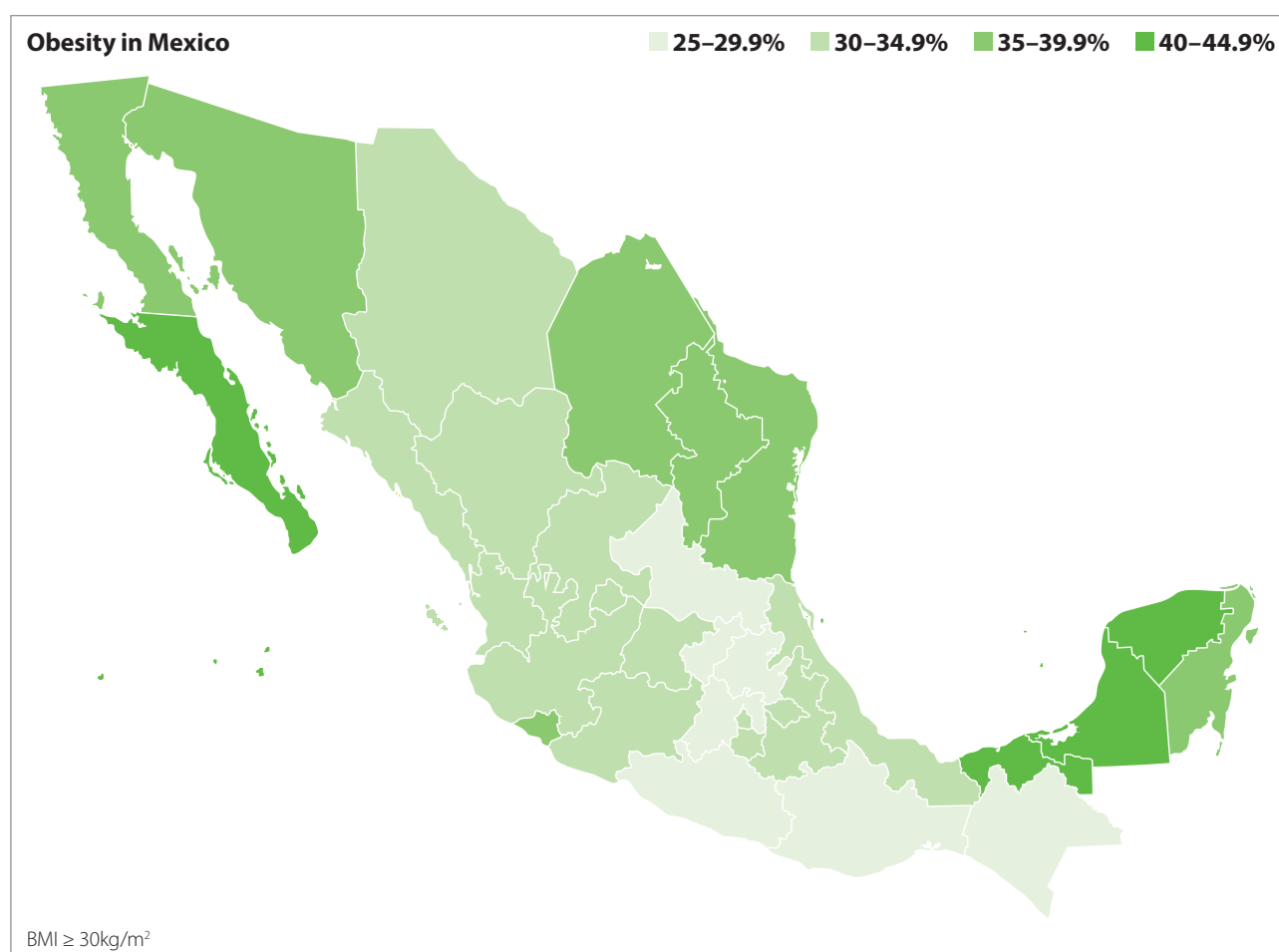
The total overweight/obese population – 69.4% of men and 73% of women – is the highest of any of the countries surveyed for this report, first noted as overtaking the United States in 2013,¹⁸⁴ and the highest in the world among populous nations.*

Childhood obesity rates are also very high – for example, among children aged 5–11, 19.5% of boys and 20.2% of girls are overweight, with a further 17.4% and 11.8% respectively with obesity.¹⁸⁵

Obesity is estimated to be responsible for about 8–10% of premature deaths in Mexico.¹⁸⁶

One study has investigated the demographics of the groups most likely to have obesity, who is most likely to be diagnosed and who is most likely to be treated, and those with a lower educational level are most likely to have obesity but are less likely to be diagnosed and treated than those with a higher educational level.¹⁸⁷

26.9% of men and 37.5% of women have obesity in Mexico.



Source: National Health and Nutrition Survey (2012).¹⁸⁸

Thanks to Tania Cony Aburto Soto, Professor Juan Rivera Dommarco, Dr Mauricio Hernández Ávila and Dr Homero Martínez for their assistance with compiling this country information.

* Some small Pacific nations have higher rates of obesity – for example, Nauru's obesity rate is over 70%.

Obesity policy

In recognition of the very high rates of obesity among its population, Mexico has implemented two major initiatives: the National Agreement for Nutritional Health (ANSA) (2010)¹⁸⁹ and a National Strategy for Prevention and Control of Overweight, Obesity and Diabetes (2013).¹⁹⁰

ANSA sets out 10 objectives, including: reduce the intake of sugar from beverages and processed foods, reduce intake of saturated fats and trans fats, and reduce portion size, as well as increase physical activity in schools and workplaces. The objectives in the plan are to be achieved through four means: information, education and communication; advocacy and regulation (including the development of healthy public policies across sectors, and regulating the marketing of foods and beverages); monitoring and evaluation; and research.

The National Strategy for Prevention and Control of Overweight, Obesity and Diabetes includes the promotion of healthy lifestyles, screening and timely care for people with or at high risk of obesity, and increased regulation and taxes.

Achievements to date include initiatives banning sodas and regulating unhealthy food in schools, and research is being undertaken into the most appropriate front-of-package nutrition labelling.¹⁹¹ Most recently, under the new National Strategy, Mexico has begun to use taxation to tackle one of the major drivers of obesity: excessive consumption of sugary beverages, of which Mexicans drink an average of 163 litres a year.¹⁹² In 2013, a new tax of 1 Mexican peso per litre was levied on these drinks – estimates by the National Institute of Public Health are that this increase in price (of 10%) could reduce consumption to 141 litres per year (a fall of about 15%), which could prevent up to 630,000 cases of diabetes by 2030.¹⁹³ An 8% tax has also been levied on certain food categories containing 275 kcal or more per 100g.¹⁹⁴ Advertising during peak hours for children's viewing is also being addressed, with restrictions on advertising of foods that do not have a healthy nutrient profile.¹⁹⁵

According to the National Health and Nutrition Surveys (ENSANUT), obesity rose more slowly between 2006 and 2012 (0.3%) than between 2000 and 2006 (1%) – but obesity rates remain extremely high, and there is no evidence that they are likely to fall, so continuing strong policies are required.¹⁹⁶

There is a clinical practice guideline for the diagnosis and treatment of obesity.¹⁹⁷ However, a study published in 2012 found that just 20.2% of people with obesity had been diagnosed as such, only 8.0% undertook treatment following the diagnosis, and just 5.6% had lost weight intentionally.¹⁹⁸

Obesity targets

There are three targets on obesity:¹⁹⁹

- to decrease the prevalence of obesity and overweight in the 2–5-year-old population from the rates found in the ENSANUT survey in 2006;
- to stop obesity and overweight prevalence growth in the 5–19-year-old population; and
- to slow the increase of obesity and overweight prevalence in adults.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
32.2	39.1	71.3	✓	✓	n/a	✓✓

3.10 Spain

Obesity statistics

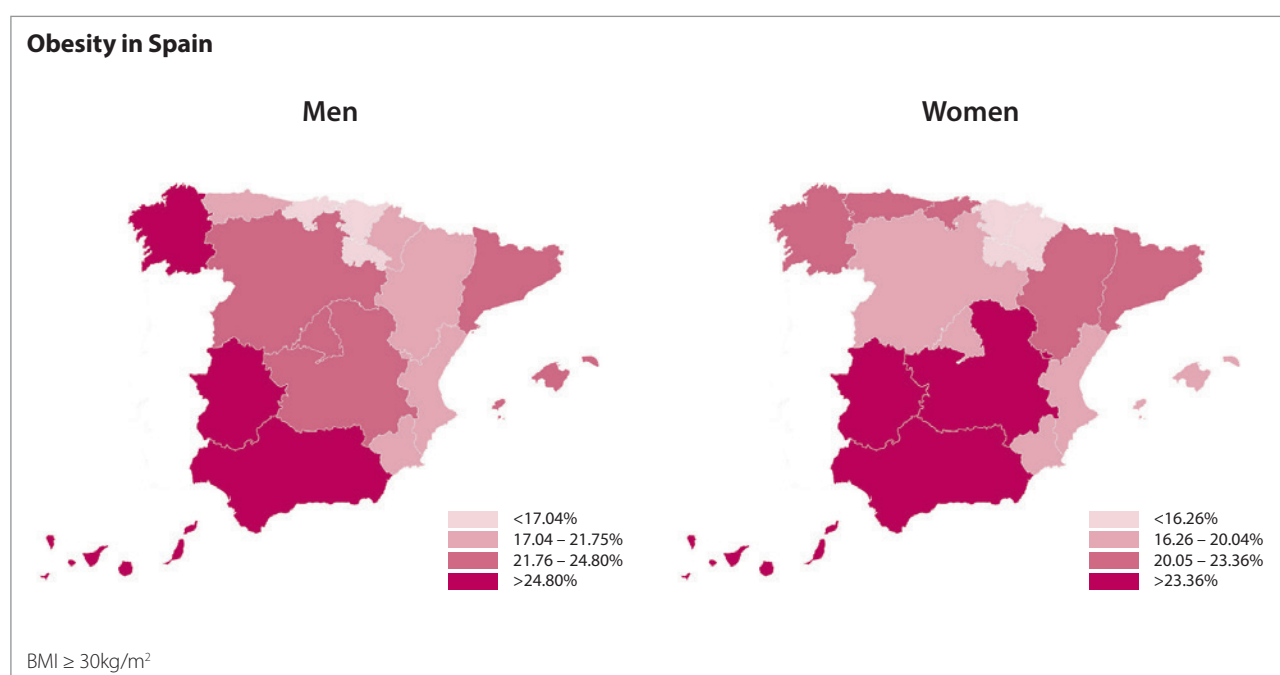
Obesity rates in Spain are currently 22.9% (24.4% among men and 21.4% among women), with a further 39.4% overweight (46.4% of men and 32.5% of women).²⁰⁰ This is very significantly higher than the estimates in 1997 and 2003, which were that 11.9% and 13.3% had obesity.²⁰¹

In addition, class III obesity (BMI of 40 kg/m² or over) has increased sharply, from 0.18% to 0.61% in just 14 years – an increase of 4% per year for women and 12% per year for men.²⁰²

Estimates of childhood obesity vary, with one study finding around 12.6% of children aged 8–17 to have obesity (with a further 26% overweight),²⁰³ and another study finding that around 18% of children aged 6–10 have obesity (and a further 14% overweight).²⁰⁴ This is one of the highest rates in Europe, but it has not risen much in recent years.

There is also a steep socioeconomic gradient in obesity among Spanish women – 29% of women with primary education or less have obesity but only 11% of those with a university-level education.²⁰⁵

24.4% of men and 21.4% of women have obesity in Spain.



Source: Gutiérrez-Fisac et al. (2012).²⁰⁶

Obesity policy

In 2005, the Strategy for Nutrition, Physical Activity and the Prevention of Obesity (NAOS) was drawn up by the Ministry of Health and Consumer Affairs, with a goal 'to promote a healthy diet and foster physical activity to invert the growing trend of the prevalence of obesity and thus to substantially reduce morbidity and mortality attributable to chronic diseases'.²⁰⁷

In 2011, the Spanish Law on Food Safety and Nutrition was passed, which contains measures to set up a legal framework to implement the NAOS and commits to reviewing the strategy every five years.²⁰⁸ A set of indicators in obesity-related issues has been drawn up by the Health Ministry, to improve data collection and monitoring of the NAOS in the future.²⁰⁹ In early 2013 an Observatory of Nutrition and of the Study of Obesity was established, which as

Thanks to Dr Maira Bes-Rastrollo and Professor Javier Salvador Rodriguez for their assistance with compiling this country information.

well as measuring and analysing obesity trends will report on policy evolution and promote education and physical activity. It is hoped that the Observatory will give increased impetus to efforts to tackle obesity.

Other recent policy measures include an agreement between the Spanish Agency for Food Safety and Nutrition (AESAN) and a number of food and beverage companies, to carry messages promoting healthy lifestyles on television throughout the year, and the extension of a code restricting food and drink advertising to young people under 15 (an extension from the earlier age of 12), and extending the restrictions to the internet.²¹⁰

The Centre for Biomedical Research – Physiopathology of Obesity and Nutrition (CIBERObn) – is a public research consortium founded in 2006. It brings together 35 groups from leading research centres in Spain, with the mission to promote better knowledge of the contributing factors of obesity, and is funded by the Instituto de Salud Carlos III (National Institute of Health) from the Ministry of Economy and Competitiveness.^{210a}

Orlistat is available in Spain – Alli (without medical prescription) and Xenical (with medical prescription) – not paid for by the state. Bariatric surgery is recommended only for those with a BMI of 40 kg/m² or over or 35 kg/m² or over with co-morbidities.²¹¹ There are also guidelines on treating and managing obesity in children and adolescents – which state clearly that dietary and physical-activity guidance should be used, although in extreme circumstances drug therapy and bariatric surgery may be considered for adolescents.²¹²

The Spanish Society for the Study of Obesity (SEEDO) has also published a number of consensus documents – for example on nutritional recommendations and other options,²¹³ and on bariatric surgery.²¹⁴

Obesity targets

Spain has not set national targets to reduce obesity – but is a signatory of the WHO Global Action Plan on the Prevention and Control of Non-Communicable Diseases 2013–2020,²¹⁵ which includes a commitment to halt the rise in obesity by 2025.

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
22.9	39.4	62.3	X	✓✓	n/a	✓✓

3.11 United States

The statistics

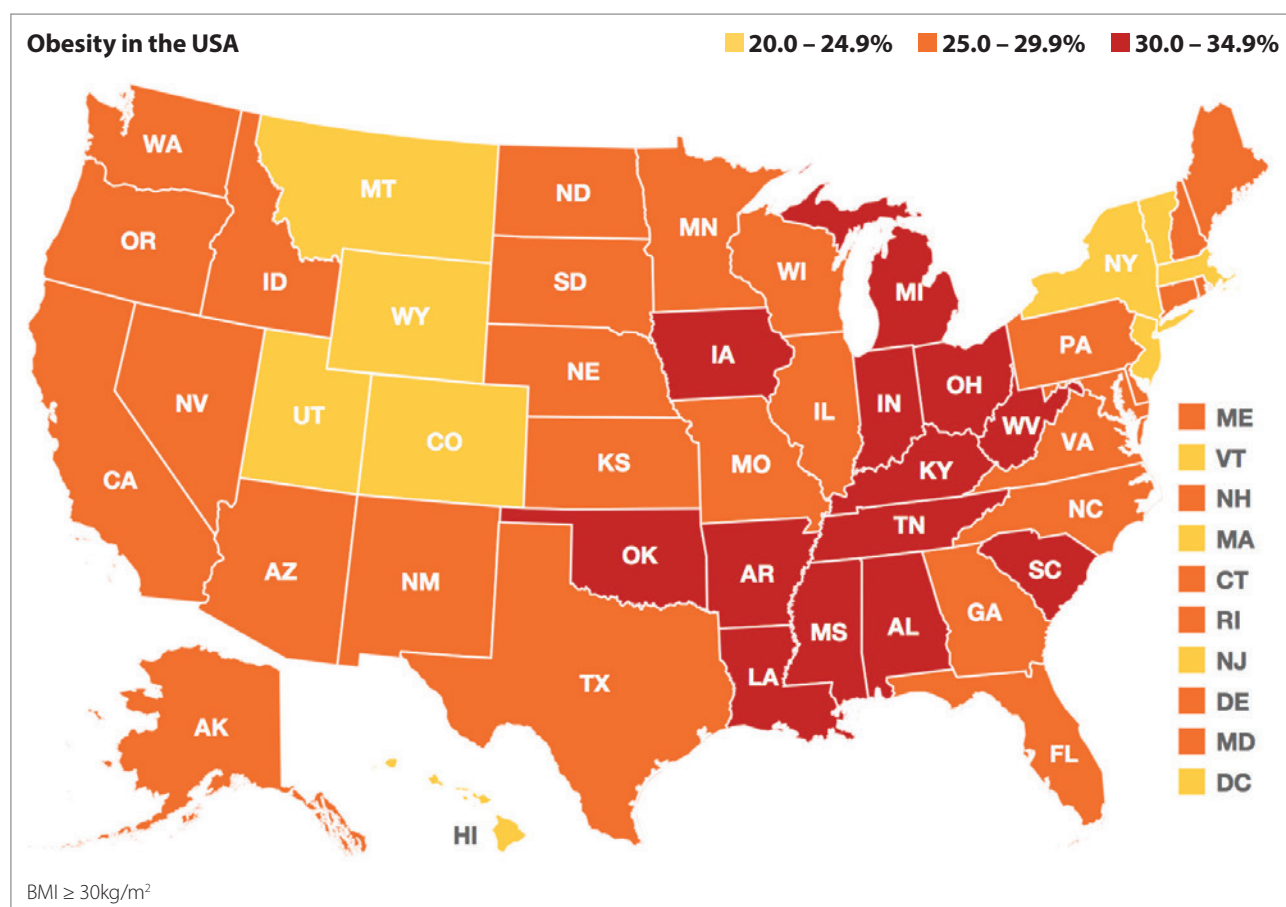
Obesity has increased dramatically in the United States over the last few decades, rising from 14.5% in the 1970s to 22.5% by the early 1990s, to 35.7% in 2010 – 35.8% of men and 35.5% of women.²¹⁶ Today, 68.8% of the population are currently either overweight or obese (73.9% of men and 63.7% of women),²¹⁷ and there are significant variations among different ethnic groups – for example, the obesity rate among non-Hispanic black women in 2010 was 58.5% and 32.2% among non-Hispanic white women.²¹⁸

Levels of obesity among high-school students nationwide are currently around 13% (up from 10.6% in 1999) and overweight levels are 15.2% (up from 14.2%).²¹⁹

There are some signs, as in England, that obesity rates may be levelling off among both adults and children (although it is still increasing among adolescent boys²²⁰). Obesity rates, however, remain 'far too high' – no state has an adult obesity rate below 20%.²²¹ In addition, rates of severe obesity among both adults and children are continuing to increase – for example, in the period 2000–10, there was an increase of 70% in the prevalence of BMI > 40.^{221a}

There is a socioeconomic gradient in obesity: 35% of adults aged 26 and older who did not graduate from high school are obese, compared with 22.1% who graduated from higher education.²²²

35.8% of men and 35.5% of women have obesity in the United States.



Source: Trust for America's Health and the Robert Wood Johnson Foundation (2013).²²³

Obesity policy

Because the United States is a federal system, there is not a national obesity policy. The First Lady's Let's Move campaign²²⁴ is a national effort to tackle childhood obesity, launched in 2010 with the goal of halting and reversing the epidemic of childhood obesity within one generation. Success in obesity prevention goes well beyond the health sector, and there is a range of legislation that can work to prevent obesity, at state or local level. New York City is well known for the range of innovative public health measures taken by Mayor Bloomberg – including requiring calorie labelling and a ban on the use of trans fats in restaurants, the setting up a bicycle-hire scheme in the city, and the Green Carts programme (1,000 mobile carts that sell only fruits and vegetables).²²⁵

At federal level, the priority accorded to medical interventions is evidenced by whether they are open to reimbursement by Medicare and Medicaid. Obesity screening has been recommended by the US Preventive Services Task Force (USPSTF) since 2003,²²⁶ and in 2011 intensive behavioural therapy for obesity was approved as being 'reasonable and necessary for the prevention or early detection of illness or disability' and is now open to reimbursement on Medicare and Medicaid.²²⁷

The National Institutes of Health states that 'Weight loss surgery is one option for weight reduction in a limited number of patients with clinically severe obesity, i.e., BMI of 40 kg/m² or over or 35 or over kg/m² with comorbid conditions. Weight loss surgery should be reserved for patients in whom efforts at medical therapy have failed and who are suffering from the complications of extreme obesity.'²²⁸

Bariatric surgery may be covered by Medicare if the patient has at least one health problem linked to obesity, if the procedure is suitable for the patient's medical condition and if approved surgeons and facilities are involved.²²⁹

The Affordable Care Act will increase the incentives for employers to provide wellness programmes for employees, including weight-management.*

Finally, there is a Strategic Plan for NIH Obesity Research (published by the National Institutes of Health), to act as a guide to increase research across a wide range of areas, to develop new and more effective approaches to address obesity.²³⁰

Obesity targets

There are federal-level targets for decreasing obesity in the United States. Every decade, the Department of Health and Human Services publishes a 10-year plan, Healthy People, which sets targets on a range of health issues, including obesity. Healthy People 2020,²³¹ published in December 2010, has set goals to:

- increase the proportion of adults who are at a healthy weight by 10% (increasing the level from 30.8% at a healthy weight to 33.9%);
- reduce the proportion of adults who are obese by 10% (decreasing the level from 33.9% to 30.5%); and
- reduce the proportion of children and adults who are obese by 10% compared to rates in 2005–2008.²³²

* Employers themselves clearly appreciate the impact that obesity has on their workforce and on insurance premiums, and are beginning to take on responsibility for the issue in practice – in a recent survey of more than 350 major US employers, nearly two-thirds of companies' health insurance will cover bariatric surgery in 2014, with over a third covering approved obesity drugs and intensive behavioural interventions for employees with a BMI of more than 30 kg/m², and over half making available on-site weight management programmes: see National Business Group on Health press release, 28 August 2013: <https://www.businessgrouphealth.org/pressroom/pressRelease.cfm?ID=214>

There are also a number of obesity-related targets in Healthy People 2020, including targets for increasing healthy options in schools and workplaces, and nutrition targets (such as increasing fruit and vegetable consumption).²³³

Obesity targets set in the past have not been achieved. Healthy People 2010 set targets to reduce adult obesity to 15% and childhood obesity to 5% by 2010, but obesity continued to rise steeply.²³⁴

Adult obesity (%)	Adult overweight (%)	Combined adult o/w and obese (%)	National obesity targets?	National obesity policy?	State-level obesity policy?	Guidance on surgery/drugs?
35.7	33.1	68.8	✓✓	X	✓	✓✓

4. The policymaker survey

4.1 Survey methodology and policymaker demographic

This survey of policymakers' attitudes toward and knowledge of obesity issues, commissioned by the European Association for the Study of Obesity and C3 Collaborating for Health,* was conducted by Harris Interactive† in February–March 2014. It built on a successful survey of policymakers carried out in three countries during April–May 2013 (England, Spain and the United States), extending it to an additional eight (Brazil, Bulgaria, Canada, Denmark, France, Germany, Italy and Mexico). The results of the two surveys have been combined in this report.

4.1.1 Methodology

In total, **333 policymakers were interviewed**: 30 from Bulgaria, Denmark, France, Germany, Italy, Mexico, Spain and the United States, and 31 from Brazil, Canada and England. The number for each country was chosen to provide some robustness of data given the time/cost to execute the survey.

The interviews were conducted by telephone, either with a **policymaker or with his/her designate** (the qualifications of any designate – such as a chief of staff – were verified before the interview, to ensure that he/she could speak for the policymaker). The survey was written in English and designed to be clear and easy to translate; it was then translated into the national language of each country. Each interview lasted an average of **21 minutes**. The data are not weighted.

The survey canvassed the perceptions and opinions of the policymakers about the situation in their countries in relation to:

- What? – the extent of obesity
- Who? – responsibility for obesity
- Why? – drivers of obesity
- How? – prevention, treatment and management of obesity
- When? – obesity priorities now and in the future

A small honorarium (which could be donated to charity) was offered to those interviewed, but only five (1.5%) of the policymakers took up the offer.

333 policymakers were surveyed, 30 or 31 from each country.

* This initiative was supported by an unrestricted grant from Novo Nordisk A/S.

† Now Nielsen, as of February 2014.

A note on sample size

Although 333 policymakers were interviewed in total, the sample size for each country was relatively small (30–31 per country), and many of the differences captured were differences of degree rather than of opinion (for example, whether something is perceived as a ‘strong’ or ‘very strong’ driver of obesity). These factors mean that drawing conclusions, particularly at the country level, is difficult – and the messages in this report come with the caveat that the sample size was small.

4.1.2 Policymaker demographic

Those who took part in the survey were selected for their position in government, not for their particular responsibility for obesity. However, they may all, in the future, play a role in deciding priorities that affect the path of obesity in their countries, as combating obesity is an issue that cross-cuts many ministries’ responsibility. To ensure a **balanced perspective across government**, half of the policymakers in each country were drawn from the executive branch (an executive officer or designate), with the remainder either from the legislature or a federal-level staff member (such as an agency member with voting power). In terms of **gender balance**, slightly more women than men (58% female; 42% male) were interviewed.

There were differences between countries in **age and experience** of those interviewed, as measured in years in current position and years in policymaking.

- The policymakers interviewed in Brazil, Germany and Mexico had the highest proportion (over 40%) aged under 35, compared with none in Spain and just 7% in Bulgaria and Denmark. On average across all the countries, 16% of the policymakers interviewed were aged over 55, but half of all the policymakers in the United States were in this category.
- The average time that those interviewed had been in their current post was 8.6 years. The country where the policymakers had been in post for the shortest time on average (≤5 years) were Bulgaria, Mexico and England. The longest average time the policymakers had been in post were in Italy (16.8 years) and the United States (11.2 years).
- The average time that the policymakers had spent in policymaking is 9 years. In Canada the average was the lowest – 6.3 years – with a quarter having spent less than a year in policymaking or as a designate. The highest were Brazil and Spain, with an average of 11.7 years in policymaking. In Brazil a third of those interviewed had been in policymaking for over 15 years, compared with none in England.

4.1.3 Policymaker interest in the survey results

In the 2013 survey (England, Spain and the United States), 44% of the policymakers requested that they be sent a copy of the report on publication. In the 2014 survey, however, this proportion markedly increased to 70% (in Mexico, 83% of the policymakers asked to see the report). This is a very high proportion, indicative both of engagement with the survey and of the growing interest that policymakers have in this area.

The policymakers were engaged with the survey: almost two-thirds of participants requested a copy of the final report.

4.2 What? – the extent of obesity

The survey opened with questions about measurement of obesity (body mass index) and the level of overweight and obesity in each country. This information is presented in infographic form in the Appendix of country snapshots.

78% of the policymakers did not know the BMI cut-off point for obesity.

4.2.1 BMI ≥ 30 : the obesity cut-point

The internationally accepted standard for obesity is when body mass index (BMI) is 30kg/m² or higher (see section 2.1, p. 4 above). On average, 22% of the policymakers correctly identified a cut-point of 30, but knowledge varied greatly between countries.

The best-informed policymakers were in Denmark and England, where 63% and 52% respectively identified 30kg/m² as the cut-point. However, in Bulgaria just one policymaker (3%) knew the cut-point, and less than a fifth of the policymakers accurately identified the cut-point in Brazil, France, Germany and the United States.

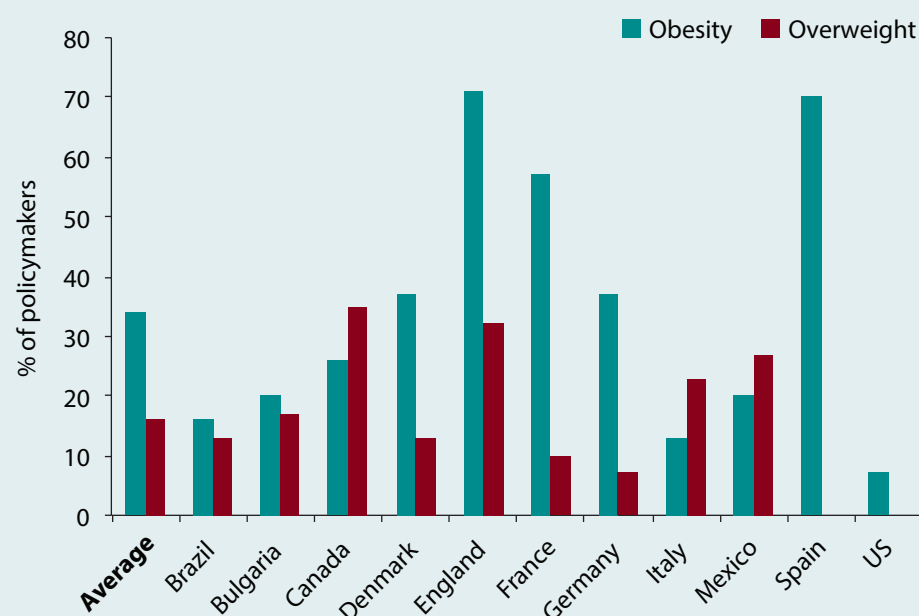
Many policymakers recognised that they did not know the answer to this question – over half of the policymakers in Brazil, Bulgaria, France, Italy and Mexico either stated that they were not sure or declined to answer. (Only in England and Spain did every policymaker provide an answer.)

This level of uncertainty – even in countries such as Mexico and the United States where obesity rates are among the highest in the world, and where the reduction of obesity is a well-recognised priority – suggests that there is a surprising lack of knowledge among policymakers of the international standards for measuring obesity.

4.2.2 Obesity and overweight nationally

The policymakers were asked what proportion of the population of their country has obesity, and what proportion of the population has either obesity or overweight. Rates of obesity vary significantly between the 11 countries – from a minimum of 10.3% (46.8% combined overweight and obese) in Italy to a maximum of 35.7% (68.8% combined overweight and obese) in the United States (see table of data on p. 8 above). Figure 1 shows the proportion of the policymakers who estimated the proportion of the population with a) obesity and b) overweight and obesity to within 5% of the official figure.

Figure 1: Knowledge of obesity and overweight



Knowledge of the national rate of obesity (to within +/-5% of the official rate)* was highest in England (71%) and Spain (70%) and lowest in Italy (13%) and the United States (7%) – even though the United States is the country with the second-highest level of obesity of those surveyed. An average of 34% of the policymakers knew the current rate of obesity in their country.

In many countries, the obesity rate was significantly **overestimated**: over half of the policymakers overestimated the obesity rate in Brazil, Bulgaria, Canada and – most strikingly – Italy, which is the country with the lowest rate of obesity, and where 87% of the policymakers thought that the rate of obesity is more than 5% greater than the current data suggest. In Mexico, 40% of policymakers **underestimated** the rate of obesity – perhaps surprising, given that it is clearly a policy priority in the country (as reflected in responses to later questions in the survey).

As Figure 1 shows, policymakers across all countries are much less knowledgeable about **the rate of overweight** than about the rate of obesity: just 16% of the policymakers knew the current rate of overweight in their country (to within +/-5%)*. Canada and England were the best informed – but even in England, where a substantial majority of the policymakers knew the obesity rate, just 32% could accurately state the overweight/obesity rate.

This time, many more countries **underestimated** the total population that is above a healthy weight – over half of policymakers underestimated the overweight rate in Bulgaria, Denmark, England, France, Germany, Italy, Spain and the United States. Most striking were Spain (where all the policymakers underestimated the overweight rate) and Germany (80% underestimated). Brazil was the exception – over half of the policymakers overestimated the proportion of the population that is overweight.

This **knowledge gap about obesity – and, particularly, overweight** – is striking, especially given the range of policies addressing obesity in many countries, and the interest that the policymakers expressed in the issue. Enabling people with overweight to stay healthy and not to gain more weight (with the consequent health impacts) is an essential part of any primary-prevention strategy.

Note: In Brazil, Mexico and the United States, a substantial proportion of the policymakers (between a quarter and a third) either did not know or declined to answer this question. This is perhaps indicative of their awareness of the seriousness of the issue in their countries, and a reluctance to provide a wrong answer.

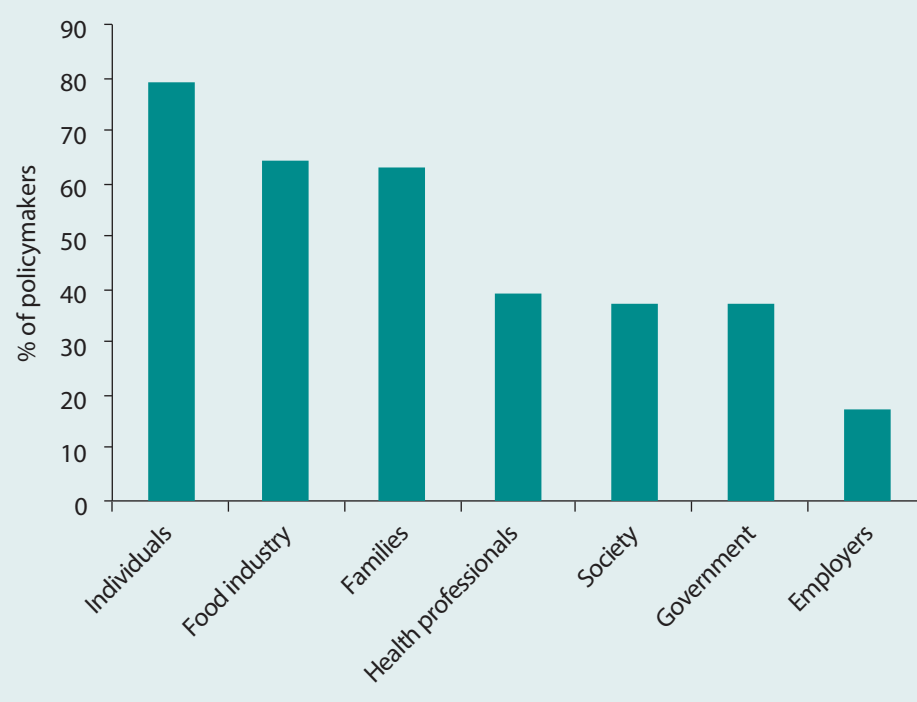
4.3 Who? – responsibility for obesity

The importance of engaging a wide range of actors in tackling obesity is increasingly acknowledged by experts, both internationally and at national level. In 2011, the United Nations held a High-level Meeting on non-communicable diseases, which included a strong focus on the risk factors for obesity – and the Political Declaration adopted at that Meeting clearly stated the need to take a ‘whole-of-government, whole-of-society’ approach (see section 2.4, p. 7 above). Although individuals make numerous decisions every day about diet and physical activity, these choices are influenced – to a greater or lesser degree – by a variety of actors, including families, society, government, health professionals and the private sector.

The survey explored the extent to which the policymakers recognised the impact of these multiple stakeholders by asking them to state how responsible seven groups of actors will be in reducing obesity levels in the future. Figure 2 shows the percentage of the policymakers who responded that each group is ‘very’ responsible for tackling obesity in the future.

66% of the policymakers did not know the current prevalence of obesity in their country – and 84% did not know the prevalence of overweight.

* According to the data sources in the table on p. 8.

Figure 2: Responsibility for obesity

Individuals

Individuals are, of course, at the heart of tackling obesity, and this was overwhelmingly recognised by the policymakers: all but one of those who expressed an opinion thought that people have at least some responsibility for their own weight, and a total of 79% of the policymakers felt that individuals are 'very' responsible for reducing obesity levels in the future.

Families

Families, too, are key to reducing obesity – although the policymakers stressed the responsibility of families less strongly than individuals (63% considered families to be 'very' responsible). Despite the focus in US and Spanish policy on tackling child obesity, fewer than half of the policymakers in the United States and Spain regard families as being 'very' responsible. In contrast, in Mexico – where child obesity is also a major concern – 93% of the policymakers see families as 'very' responsible.

Society

Opinion was mixed among the policymakers regarding the influence of society on obesity, with an average of 37% stating that society is 'very' responsible. In Mexico, where the government has implemented a wide range of cross-sectoral policies, the policymakers fully appreciate the need to involve the whole of society – all the policymakers in Mexico and Spain recognised that society bears some responsibility. However, in contrast, in England and the United States, about a quarter of the policymakers thought that society is 'not responsible' at all.

Government

The more individualistic view of obesity taken by US policymakers was also seen in their responses on the role of government – a fifth of the US and German policymakers (and slightly fewer from France and Bulgaria) considered government to bear no responsibility whatsoever for reducing obesity. Just 13% of the German policymakers thought that government is 'very' responsible, lower even than the United States (17%). Again, policymakers in Mexico saw the need for a holistic approach, and felt most strongly that government plays a part. On average, 37% of the policymakers considered government to be 'very responsible'.

Individuals, families and the food industry were seen as most critical in reducing future obesity.

Policymakers from Mexico strongly recognised the widest range of actors who can help to reduce obesity.

Private sector

An important aspect of the ‘whole-of-society’ approach advocated by the UN Political Declaration stresses the need to involve the private sector – represented in the survey by questions on the food industry and the role of employers.

The policymakers almost universally considered the **food industry** to have a very strong role to play in tackling obesity – in total, 96% thought that the industry bears at least some responsibility, with 64% stating that it is ‘very’ responsible. There were particularly strong views expressed in the two Latin American countries in the survey: in Brazil 84% of the policymakers considered the industry to be ‘very’ responsible, and in Mexico this figure is 80%. The two countries where opinion was most divided were the United States and Denmark (and even in these two countries, only 10% of policymakers felt that the industry has no responsibility).

People in employment spend around eight hours a day at their place of work for decades, making the workplace an important arena in which to foster healthy choices – but the responsibility that the policymakers placed on **employers** to tackle obesity was relatively low. Just 17% of the policymakers thought that employers are ‘very’ responsible, and 29% felt that employers have no responsibility – and in France, almost two-thirds considered employers to bear no responsibility. Even in the United States, where incentives are being put in place through the Affordable Care Act for employers to encourage healthy lifestyles, a third of policymakers thought that employers bear no responsibility. Mexico was a clear exception, as policymakers once again recognised the need for multi-sector involvement: none of the Mexican policymakers thought that employers have no responsibility, and 60% considered them to be ‘very’ responsible.

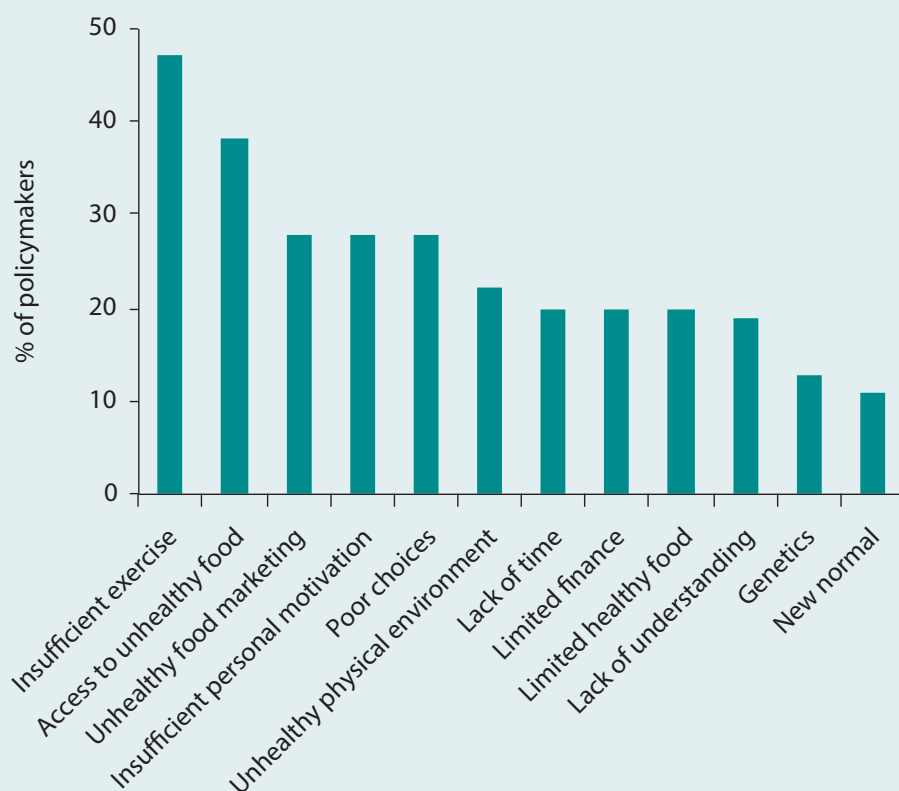
Health-care professionals

Health-care professionals (HCPs) can play an important part both in helping people to remain a healthy weight, and in advising people with obesity on the best course of action to reduce their weight. Although an average of 39% of the policymakers saw HCPs as being ‘very’ responsible, there were marked differences between countries as to the importance of their role. Policymakers from Bulgaria, Canada, Denmark, England, Mexico and the United States saw HCPs as having the most responsibility, whereas in Brazil, France, Germany, Italy and Spain at least a fifth of the policymakers regard HCPs as having no responsibility at all. At the two extremes, 80% of the policymakers from Mexico saw HCPs as being ‘very’ responsible; in contrast, 43% of the Spanish policymakers saw HCPs as ‘not responsible’ for obesity in the future.

Opinion on the importance of involving HCPs in obesity varied significantly between countries.

4.4 Why? – drivers of obesity

Although individuals are at the heart of anti-obesity efforts, in practice living a healthy lifestyle may not always be the easiest choice to make. The survey asked the policymakers about the impact that a number of drivers have on an individual’s risk of obesity. Figure 3 shows the percentage of the policymakers who considered each driver to have a ‘very strong’ influence on obesity. Some of the barriers to living healthily are specific to individuals (such as personal motivation), and others are external to them (such as an unhealthy physical environment).

Figure 3: Drivers of unhealthy choices

Insufficient exercise was seen as the strongest driver of future obesity.

4.4.1 Individual drivers

The policymakers strongly agreed that physical activity is the most important factor personal to the individual that impacts on the future risk of obesity. **Insufficient exercise** was seen by almost half of the policymakers as having a 'very strong' impact – this rose to 67% among Mexican policymakers, but just 23% of Bulgarian policymakers. Brazil's policymakers put the least emphasis on physical activity – 26% considered it to have just a 'moderate' impact – despite the country being the home of the Agita Mundo ('Move the World') movement to encourage physical activity (see section 3.1, p. 10 above).

The survey questioned the policymakers on the extent to which they perceived a **lack of understanding of the risk associated with obesity** (poor nutrition and lack of physical activity) to be an influence on tackling obesity. All but three of the policymakers agreed that it has at least some impact, but just 19% regarded this as having a 'strong' impact. (In Italy, half the policymakers considered this to be a strong driver, and 40% in Spain and Mexico, suggesting that the many obesity policies in place in Mexico – see section 3.9, p. 26 above – still have much to do to educate the population.) In Germany, a quarter of the policymakers felt that insufficient understanding has 'no' or only a 'slight' impact – indicating that they regard their population as well informed.

The relatively low priority that the policymakers afforded to the need for more information contrasts sharply with the strong focus on awareness-raising campaigns in many of the countries surveyed, whose aim is precisely to improve understanding among the population (see country summaries (section 3) and section 4.5.1, p. 40 below).

Once people understand the risks, **personal motivation** comes into play: if individuals are not sufficiently motivated to change their lifestyles, they will make choices that do not benefit their long-term health. The policymakers regarded motivation as an important driver, albeit not necessarily having a 'very strong' impact – but lack of motivation and lack of physical activity are the only two drivers in the survey that the policymakers unanimously agreed have an impact. Lack of personal motivation was regarded as particularly important by the English

and Spanish policymakers (over 90% seeing it as having a 'strong' or 'very strong' impact) with the lowest priority being afforded to it by the Bulgarian policymakers (just 50% seeing it as a 'strong' or 'very strong' impact).

Motivation drives many of the decisions that we make, and the policymakers were asked about the impact of **poor personal choices** on the risk of obesity. An average of 28% considered this to have a 'very strong' impact, and only four of the policymakers thought it has no impact at all. Mexico had the highest focus on poor choices: in total, 90% of the policymakers felt that poor choices have a 'strong' or 'very strong' impact on obesity, which contrasts with their awareness that there are many external barriers to healthy lifestyles that limit the choices that can be made (see section 4.4.2, below).

Choices are not made in a vacuum – they are driven both by external factors and also by personal circumstances. The policymakers were asked about the influence both of **limited financial resources** and of a **lack of time** to lead a healthy lifestyle (which is sometimes described as 'time poverty'). Preparing fresh food, for example, can be both more time-consuming and more expensive than buying processed food. Responses of the policymakers to these issues were similar, with 20% seeing each of these issues having a 'very strong' impact. Policymakers in Bulgaria, Denmark, France and Germany were the least likely to say that either limited finance or lack of time have a 'very strong' influence.

In two countries – England and Canada – all of the policymakers appreciated that limited finance and lack of time have at least some impact. Notably, 11 of the Canadian policymakers, when asked (in an open question) what the most important obesity policy is in Canada, included mention of the role of finance and poverty in healthy lifestyles. The US policymakers were also almost unanimous – just one considered limited financial resources as having no impact, and all agreed that limited time can be a constraint. These barriers to healthy choices were perhaps not fully taken into account by the policymakers in their responses on the level of responsibility of the individual in tackling obesity (see section 4.3, p. 35 above), when 97% of the English, 87% of the US and 81% of the Canadian policymakers expressed the view that the individual is 'very responsible'.

The final factor personal to the individual – and the one over which we have least control – is **genetics and physiological factors**. This was stressed less strongly by the policymakers than many of the other personal drivers of obesity, which chimes with the stress on personal responsibility in section 4.3 (p. 35 above) – just 13% thought that it has a 'very strong' impact. However, most regarded it as having at least a 'moderate' impact – with Italy particularly recognising this. In contrast, in Germany, a third of the policymakers felt that it has only a 'slight' impact, so the emphasis is on the individual to determine their own future.

4.4.2 External drivers

Three of the drivers about which the policymakers were surveyed address the issue of food. As already noted (section 4.3, p. 35 above), a very high proportion considered the food industry to bear at least some responsibility for tackling obesity – perhaps because there has been extensive media coverage about food labelling and marketing to children. The **marketing of unhealthy food** was recognised by 98% of the policymakers as having an impact on the risk of obesity, and 28% that it has a 'very strong' impact. Mexican policymakers had the strongest views on this issue, with 87% saying that unhealthy food marketing has a 'strong' or 'very strong' impact. In Bulgaria, in contrast, just 43% said it has a 'strong' or 'very strong' impact, and two policymakers felt that it has no impact at all.

But eating well is also about access to healthy food. Food deserts – areas in which there is very limited access to healthy foods such as fresh fruit and vegetables – are a manifestation of how living in a deprived area can lead to health inequalities. In many of the countries surveyed, there is a clear 'obesity gradient' (particularly among women), with the least educated and least well off also being the most likely to have obesity. The policymakers felt more strongly that too much access to unhealthy food is a stronger driver of obesity than lack of access to healthy food.

The impact of limited financial resources was most recognised in Canada, England and the United States.

The policymakers appreciated the impact both of the marketing of and access to unhealthy food.

- Too much **access to unhealthy food** was seen by 38% of the policymakers as having a 'very strong' impact, ranging from 73% of the Mexican policymakers and 67% of the Spanish policymakers (perhaps a response to a perceived threat to the traditional Mediterranean diet), to 19% of the Brazilian policymakers. Only two of the policymakers regard it as having no impact on an individual's risk of obesity.
- In contrast, **limited access to healthy food** was seen as having a 'very strong' impact by just 20% of the policymakers. Italian, Canadian and US policymakers were most likely to see its impact as 'very strong', perhaps because of worries about changes to the Mediterranean diet (in Italy) and an appreciation of the reality of 'food deserts' (in Canada and the United States). In Germany, none of the policymakers saw lack of access to healthy food as having a 'very strong' impact on obesity, and 20% of them thought that it has no impact.

The places in which we live, work and play can also impact on how easy it is to make healthy lifestyle choices – and the policymakers were asked how strong a driver of obesity risk is an **unhealthy physical environment**. Just seven of the 333 policymakers thought that this has no impact, but it was not regarded as among the most significant barriers to healthy lifestyles – 22% regarded it as having a 'very strong' impact. In Spain and Mexico, however, this rose to over 40% (again reflecting Mexico's policymakers' appreciation of the range of influences on health). In Brazil, just one policymaker considered the physical environment to have a 'very strong' impact – but a quarter of Brazilian policymakers were not sure of its impact, which echoes their uncertainty about the impact of poor personal choices.

Average BMI has been steadily increasing, among adults and children, in all countries included in the survey over the last few decades (see country summaries, section 3 above), and there is some evidence that being overweight is becoming normalised (see section 2.2, p. 5 above). The final barrier that the survey addressed was about the population's perception of obesity: whether **being overweight is the new normal**. Policymakers appeared to have less of an appreciation of this factor: of all the drivers, this was regarded as the least influential, with just 11% citing it as a 'very strong' driver. Policymakers in Bulgaria and Denmark were particularly sceptical: around a fifth of policymakers thought it has no impact at all. In Mexico and Italy, however, around a quarter did regard it as having a 'very strong' impact. This failure by many policymakers to understand that people's perception of what is a 'healthy' weight is changing could reflect their relative lack of knowledge about 'overweight' – that the majority of people in many of the countries in the survey are now above a healthy weight.

4.5 How? – prevention, treatment and management of obesity

The survey focused on both the prevention of obesity (through measures that affect the whole population) and the treatment and management of the condition (whether through lifestyle changes, drugs and surgery). It dealt first with whether the policymakers were aware of different policies in obesity prevention and treatment/management in their countries, and then whether the various policies work well in practice.

4.5.1 Public health: education, nudging and shoving

What is being done?

Education and **public-health campaigns** are the most popular tools used by governments to tackle obesity – and this is reflected in the responses of the policymakers, 40% of whom see education and public-health campaigns as being used 'a lot'. The countries where they were seen as being used the most are England and Spain, where over 90% of the policymakers see both approaches as being used 'a lot'. In contrast, in Brazil, over half of the policymakers regard these approaches as being used only 'a little' if at all.

A 'new normal' of overweight and obesity was not seen as having a strong influence on the risk of obesity.

Awareness-raising was seen both as the most popular and most effective tool used to tackle obesity.

Awareness among many of the policymakers of education and public-health campaigns was also clear in their responses to the open-ended question ‘what is the most important policy that addresses obesity in your country?’ In a small number of countries, policymakers cited campaigns by name – notably in England, where 12 people cited the Change4Life campaign and the United States, where seven people cited the First Lady’s efforts to tackle childhood obesity.

The concept of ‘**nudging**’ – changing the default option to one that is healthier – is a concept from behavioural economics, popularised by Professors Richard Thaler and Cass Sunstein in their 2008 book, *Nudge*. The concept is spearheaded by the UK government (which established the Behavioural Insights Team within the Cabinet Office, often referred to as the Nudge Unit), and the White House has used Professor Sunstein as an adviser – so it is perhaps surprising that only 23% of English policymakers and 3% of the US policymakers stated that nudging is used ‘a lot’, compared with 43% in Mexico and Italy. In Germany, a very high proportion – 43% – of the policymakers declined to answer the question (every other policymaker in the other countries responded), perhaps in response to criticism of nudging as lacking transparency as it changes choices without people realising that they have been encouraged to do so. The Brazilian policymakers had relatively little knowledge of the concept, with over a third being unsure if the policy is used.

A final step that can be taken in encouraging people to make healthier choices is the use of **regulation** – a shove rather than a nudge. In reality, few countries use regulation – with the notable exception of Mexico, where a tax has been introduced on sugary beverages (see section 3.9, p. 26 above). Fewer than a fifth of the policymakers from most countries (other than Mexico, Spain and England) saw regulation as being used ‘a lot’ to implement obesity policies. There was also some uncertainty among the policymakers as to whether regulation is used – 8% of them were unsure, rising to a quarter in Brazil. In Germany, 17% declined to answer and a further 10% were unsure.

Given the policymakers’ appreciation of the importance of the role of the food industry (see section 4.3, p. 35 above), there may be a gap between perceived responsibility of the food industry and the requirements being placed upon them.

Do the policies work?

Education and public-health campaigns were perceived by the policymakers as the most popular tools used to tackle obesity – and **awareness-raising campaigns** are also one of the tools that policymakers saw as being most effective, with a quarter stating that these policies are working ‘very well’. They were seen as most effective in Spain and England, where 60% and 48% of the policymakers considered campaigns to work ‘very well’.

However, a fifth of the policymakers (rising to 37% in the United States and 58% in Brazil) indicated that awareness-raising campaigns are not working well at all – and their scepticism is perhaps justified. Obesity rates have been continuing to rise in most countries, suggesting that awareness-raising is not sufficient, even though they are the most frequently used policies.

It is interesting to note that three-quarters of policymakers in Italy see awareness-campaigns as working ‘well’ or ‘very well’, but they also believe that Italians have an insufficient understanding of the risks associated with obesity (see section 4.4.1) – the campaigns are not working well in practice, if people still do not understand the issue.

As currently constituted, **fiscal interventions** (such as taxes on unhealthy foods) are seen as relatively ineffective, which is unsurprising given that such tools are rarely used in obesity prevention. Italy, Mexico and Denmark’s policymakers were most likely to say that fiscal intervention has a ‘very strong’ influence – and Mexico and Denmark are the two countries in which a tax on unhealthy products has been introduced. However, 53% of Denmark’s policymakers also thought that fiscal interventions have not worked well at all – reflective of the discontinuation of the ‘fat tax’ (see section 3.4, p. 16 above).

Regulation and fiscal intervention were generally recognised as little used and, consequently, as having little influence. But many were not sure what regulation is in place, or its effectiveness.

Fiscal issues and budgets are a key part of policymaking – and yet this is an issue on which there was significant uncertainty. A high proportion of the policymakers – 16% on average, and up to 29% in Brazil and 23% in Italy and England – are ‘not sure’ how well fiscal interventions are working, and a fifth of the Spanish policymakers declined to answer.

Identifying obesity

An important first step in empowering people with obesity to take control of their weight is ensuring that they are aware of their condition (overcoming any tendency to see overweight as the ‘new normal’ – see section 4.4.2, p. 40 above). The policymakers were asked whether **identification and/or diagnosis** of people with overweight or obesity works well in their country – and this is one area in which many felt that more efforts are needed. English, Italian and Spanish policymakers were the most positive, with just two of the policymakers feeling that this is not addressed well. In several countries (Bulgaria, Canada, France, Germany and the United States), however, over a quarter felt that identification is not addressed well at all – and this rose to almost 60% in the United States. This lack of faith in the ability of the health system to identify people with obesity reflects the reality in many countries – and improvements will be dependent on ensuring that health professionals play more of a role (a group that many of the policymakers saw as having relatively little responsibility for tackling obesity).

Identification and diagnosis of obesity is an area in which many – especially from the United States – expressed more should be done.

4.5.2 Lifestyle changes

What is being done?

The main risk factors for obesity are poor diet and lack of physical activity, and the survey asked the policymakers about the extent to which they perceive **dietary-management and exercise-management programmes** as currently being used.

The perception of many of the policymakers is that there is plenty more that can be done in this area: just 28% (exercise-management) and 24% (dietary-management) see these programmes as being used ‘a lot’. The policymakers who felt that least is being done were from Brazil and the United States, where over half thought that ‘a little’ or nothing is being done in both these areas. The most positive perceptions were those of the Mexican policymakers about the use of dietary-management programmes (almost half said they are used ‘a lot’) and the German policymakers about exercise-management (over half said they are used ‘a lot’).

In each country, the percentage of the policymakers who thought that dietary-management programmes are used ‘a lot’ and exercise-management programmes are used ‘a lot’ were roughly the same. The exceptions were France and Germany: in France, the focus is on diet rather than exercise (33% thought dietary management was used ‘a lot’, compared with 13% for exercise management) and in Germany this position was reversed (20% thought that dietary management was used ‘a lot’, compared with 57% for exercise management).

The survey also asked about lifestyle changes by framing the question as one of whether **behavioural interventions** are used in each country. Policymakers were less likely to state that these methods are used – and just 12% feel they are used ‘a lot’. There was also more uncertainty in answering the question, suggesting that this terminology may be unfamiliar – almost a third of the Brazilian policymakers were not sure if behavioural interventions are used, and in all countries (other than England and Mexico) two or three policymakers were unsure.

‘Nudging’ can also be seen as a form of behavioural intervention (one of which the population will probably be unaware) – and the uncertainty about behavioural intervention is echoed in the policymakers’ responses to a question on nudging (see section 4.5.1, p. 40 above), particularly among the Brazilian and German policymakers. On average, however, more policymakers felt that ‘nudging’ is used than ‘behavioural intervention’.

In practice, access to lifestyle programmes for people with obesity is often very limited, even where guidelines make clear that they should be an option – and may be dependent on a diagnosis of obesity (see Box, p. 42 above), which is not always a priority for health-care professionals. The policymakers are correct in implying that there is much more that can be done.

Do the policies work?

Policymakers were asked their perception of how well, in practice, **lifestyle interventions** in each country achieve their aims (namely, improving diet and encouraging physical activity). Only 12% of the policymakers considered these to be working 'very well', and in Brazil and Germany fewer than 40% thought that lifestyle interventions work 'well'. In most countries around 30–40% felt that lifestyle interventions do not work well at all. Italy is an outlier on this question – 43% of the policymakers considered lifestyle interventions in Italy to work 'very well', and a further 47% that they work 'well'.

Essential to tackling obesity is **weight-loss maintenance** – even after initial weight-loss has been achieved, for many people it is a lifelong struggle to maintain their new weight. As with lifestyle interventions, there is clearly more that policymakers feel can be done, with just 13% stating that weight-loss maintenance tools and policies address this issue 'very well', and a full third regarding it as not being addressed well at all. The US and Brazilian policymakers were the most sceptical about whether policies address this issue – almost half felt that it is not addressed well at all. As with lifestyle interventions, Italian policymakers were the outlier – 43% regard weight-loss maintenance tools and policies as working 'very well' (despite the evidence that suggests that weight loss is, in practice, extremely challenging to maintain).

Counselling on weight loss is an important aspect both of lifestyle interventions and of maintaining weight loss. Opinions varied both within and between countries on whether tools and policies currently address counselling sufficiently – policymakers were most positive in England and Italy (where a third of policymakers see this as being done 'very well') and Denmark and Spain (where a quarter see it as being done 'very well'). There is also considerable scepticism: in both the United States and France, over 40% of the policymakers see counselling as being done 'not well at all' (despite recent changes to legislation in the United States that approved intensive behavioural therapy for obesity for reimbursement under Medicare and Medicaid – see section 3.11, p. 30 above).

Lifestyle interventions were not seen as having much impact, except by Italian policymakers.

Perception of the effectiveness of counselling on weight loss varied both within and between countries.

4.5.3 Drugs and surgery*

What is being done?

In all the countries surveyed other than Bulgaria, there are publicly available guidelines on the use of pharmacological and surgical treatments for obesity. However, there are only a limited number of **drug treatments** for obesity currently available on the market, and policymakers were much less likely to cite them as being used 'a lot' or 'somewhat' than they were with the lifestyle programmes (section 4.5.2, p. 42 above). Around half of policymakers in Bulgaria, Canada, England, Mexico, Spain and the United States regarded them as being used 'a little' or 'not at all'. On average, 14% of the policymakers were unsure how much drug treatments are used.

Bariatric surgery was also seen as a less commonly used way to tackle obesity than the lifestyle programmes – and, given that guidelines state that it should be used only once other options have been exhausted, this is likely to reflect the reality. None of the policymakers in France, Germany or Spain see surgery as being used 'a lot', and in Mexico and Spain over a third said it is not used at all.

* In both Germany and Spain, several policymakers declined to answer these questions – around a quarter of the German policymakers did not answer either on drug treatment or bariatric surgery.

Policymakers in Brazil were the most likely to cite bariatric surgery as being used to tackle obesity.

In Brazil, however, a quarter of the policymakers see bariatric surgery as being used 'a lot' – and this response was also clear from the responses of the policymakers to the open-ended question 'what is the most important policy that addresses obesity in your country?': three of the Brazilian policymakers cited surgery as the most important policy – but no policymaker from any other country mentioned it. This is in contrast with the perception among many of the Brazilian policymakers that health-care professionals have only limited responsibility for tackling obesity.

As with access to lifestyle programmes, limited access to drug treatments and surgery is probably the reality for much of the population in the countries surveyed, even where guidelines state that they should be provided if particular criteria are met. If anything, the policymakers seem to have overestimated the extent to which drug and surgical treatments can be accessed.

Do the policies work?

There was considerable scepticism among the policymakers of the effectiveness of policies addressing **drug treatments**. Only in England, Italy and the United States did more than half of the policymakers regard it as working 'well' or 'very well' – and in Canada, France, Mexico and Spain this falls to less than a third. Between a third and a half of policymakers in most countries felt that it does not work well at all, with the exceptions being Italy (where just 20% saw it not working well) and Mexico (where 63% thought it does not work well – perhaps a reflection of the focus of the government on public-health, preventive measures rather than treatment).

The policymakers' perception of **access to bariatric surgery** was that it is not widely available – and access to bariatric surgery is indeed restricted by guidelines, and available only to a small proportion of people with obesity. In Spain just 7% and in Mexico just 17% of policymakers considered surgery policy to be working 'well' or 'very well'. Denmark has the most stringent guideline on when surgery can be carried out (requiring a BMI ≥ 50) but, despite this, 80% of the Danish policymakers felt that access to surgery works 'well' or 'very well'.

There was considerable uncertainty about this question – an average 16% were not sure if surgery policies work well, and this figure rose to a quarter in Brazil and Germany, and around a third in France and Spain.

4.5.4 Are the policies working?

In addition to asking about specific aspects of policy, the survey asked the policymakers how well they feel that the tools and policies to address child obesity, adult obesity and non-communicable disease prevention are working.

In all countries, efforts to tackle child obesity are seen as significantly more successful than those to tackle adult obesity. An average of 29% of the policymakers see **tools and policies on childhood obesity** as working 'very well', and a further 41% that they are working 'well'. Action on childhood obesity may be more numerous and better publicised in most countries than efforts on adult obesity – and some countries have seen a slowdown in the rate of increase among children (see section 3 above). But there is a long way to go, and the very limited progress does not justify the feeling of the majority of the policymakers that the tools and policies are working 'well' or 'very well'. In Spain, for example, all the policymakers felt that child obesity is being tackled 'well' or 'very well' – although Spain's children are still among the most overweight in Europe.

However, a sizeable minority in countries other than Spain recognised that policies are not working well at all – 45% of the Brazilian policymakers, and a quarter or more of policymakers in Bulgaria, Canada, France and the United States thought that the policies are not working well. In three countries – Brazil, Germany and Italy – around a fifth of the policymakers were not sure of the impact of policies.

In all countries, efforts to tackle child obesity were seen as more successful than adult-obesity efforts.

In many countries, a sizeable minority of the policymakers were very doubtful of the **tools and policies on adult obesity**. An average of 13% saw them as working 'very well' (from 37% in Spain and 33% in Italy to just 3% in Brazil, Denmark and Germany) but an average of 30% saw them as not working well at all, with over 40% of Brazilian, Bulgarian and US policymakers expressing this view. The policies were viewed most favourably in England, Italy, Mexico and Spain, where fewer than a fifth of the policymakers saw the policies as not working well at all – and over a third of Italian and Spanish policymakers saw the policies as working 'very well'.

Given the rising rates of adult obesity in most countries – and the rate of childhood obesity, which has sharply risen over the past generation, and remains high even if there is some indication it may be levelling off in some of the countries surveyed – the policymakers who are sceptical of progress may, in fact, have a more accurate perception of reality.

Obesity is a major risk factor in prevention of non-communicable diseases (such as type 2 diabetes and heart disease), so how well a country is doing in tackling obesity is also a major indication of how well they are likely to be doing in tackling NCDs. When the question was changed to ask **how well tools and policies are working to prevent NCDs**, the average proportion of policymakers who felt that the tools and policies are dealing 'very' well with NCD prevention was the same as for adult obesity (13%), but the proportion of policymakers who thought that policies are not working well was smaller than for adult obesity. (In all countries, efforts on child obesity were still seen as more successful than on tackling NCDs.)

The US policymakers were just as sceptical about NCD prevention as they were about obesity: almost half felt that policies were not working well at all. Canadian policymakers were much more positive about NCD prevention than about obesity, with 29% (compared to 6% for obesity) seeing the policies as working 'very well'. In contrast, the Spanish policymakers – who were so positive about obesity tools and policies – were much less positive about NCD prevention, with just 7% thinking that the policies worked 'very well'.

It was notable that more of the policymakers were 'not sure' of the answer to the question on NCD prevention than were unsure of the questions on obesity tools and policies – indicating that there is more awareness of obesity efforts than NCD efforts. In Spain, where all the policymakers were willing to express opinions on obesity, over a third were unsure about the impact of policies in preventing NCDs or declined to answer. Only in England and Mexico were all policymakers able to give an answer on NCD prevention.

4.5.5 Gathering evidence on obesity

Evidence is essential if policy is to be based on what has been proven to make a difference, in prevention and management of obesity. The policymakers were asked whether they saw a need for a stronger evidence base to inform policy in three areas: prevention of obesity, management/treatment of obesity, and the prevention of obesity-related diseases.

- There was a very strong call for more evidence to inform policy in **obesity prevention**: 57% of the policymakers – including over three-quarters in England, Mexico and Spain – expressed a 'critical' need for this evidence. A quarter of the Danish policymakers felt that there is just a 'limited' need for more evidence – and just four of the policymakers (three of whom were from the United States) thought that the existing evidence is sufficient.
- The need for further evidence on the **management and treatment of obesity** is also important to the policymakers, but was a slightly lower priority. An average of 43% of the policymakers perceived a 'critical' need for more evidence to inform policy, with the strongest calls coming from Mexico and the United States (where the costs of managing and treating obesity are particularly high – see section 2.3, p. 6 above). In Bulgaria, Denmark and Germany, less than a quarter of the policymakers felt that there is a 'critical' need for more evidence.

Policymakers were more likely to be unsure of the impact of NCD prevention policies than the impact of obesity policies.

There was a strong call – particularly from the English and Mexican policymakers – for more evidence to inform policy.

- The question on whether more evidence is needed on the **prevention of obesity-related diseases** was included to see if this had an impact on the way in which the policymakers responded when the question focused on the co-morbidities that can be attendant on obesity itself. In fact, the answers were broadly similar to that on the question of evidence for obesity prevention, with 56% of the policymakers saying that there is a 'critical' need for evidence on preventing obesity-related diseases. The highest proportion (90%) of policymakers regarding the need as 'critical' were from Mexico – an even stronger call than in obesity prevention.

The calls from policymakers were uniformly strongest from England and Mexico: 100% of the policymakers from these two countries considered the need for more evidence in all three areas to be 'significant' or 'critical'.

Only a tiny proportion (1%) of the policymakers felt that no more evidence is needed to inform policy; three of the four policymakers who thought this were from the United States. The Brazilian (23%) and German (15%) policymakers were the most likely to be unsure as to whether more evidence is needed.

There is evidence available on 'what works' in obesity prevention and management (such as weight-management initiatives), although information on scalable initiatives is limited – and the strength of feeling on this issue suggests that there is a particular lack of evidence presented in a form that is accessible and comprehensible to key stakeholder groups such as policymakers.

4.5.6 A final note on policies

In answer to the open-ended question 'what is the most important policy that addresses obesity in your country?', 6% of the policymakers volunteered the information that they believe there is either no policy or very little policy in place in their country (the highest proportion being five of the 30 policymakers from the United States – where there is indeed no federal obesity policy). In addition, 29 policymakers said that they did not know if there were any policies in place to tackle obesity – and 10 of these were from Brazil, showing a significant lack of knowledge of what is in place (and which was reflected in considerable uncertainty in the Brazilian policymakers' answers to other questions in the survey).

4.6 When? – obesity priorities now and in the future

The survey also ascertained what the policymakers themselves believed to be important priorities, and what aspects of obesity they consider likely to be priorities for future obesity policy.

First, the policymakers were asked which they considered to be their **priority in terms of obesity reduction**: improving current health status, or reducing the risk of future disease. In most countries, there was a reasonably even split between the policymakers' choice, with an average of 45% putting the stress on improving current health status and 52% on future disease (4% were unsure) – indicating that there is a dual priority.

However, policymakers in two countries did not conform to this trend: Mexico and the United States. Despite sharing a border, and despite having similarly high rates of obesity (the highest of any countries in the survey), the policymakers took opposing views: in Mexico, 87% of the policymakers considered 'reducing the risk of future disease' to be their priority, whereas in the United States, 80% of the policymakers regarded 'improving current health status' to be the priority.

Finally, the policymakers were asked **what aspects of obesity will be a priority in the future**: prevention of obesity, treatment/management of obesity, or the prevention of obesity-related diseases.

US policymakers' focus was on improving current health status. In Mexico, it was on reducing the risk of future disease.

- **Prevention of obesity** was afforded the highest priority of the three options, with 76% of respondents – and over 90% in England, Mexico and the United States – expecting it to be a ‘high’ priority in the future, and just 3% expecting it to be a ‘low’ priority. Figure 4 plots the importance afforded to prevention of obesity against the obesity rate in each country (i.e. the percentage of policymakers citing prevention as a ‘high’ priority) – clearly showing that the policymakers in England, Mexico and the United States linked priority with need.

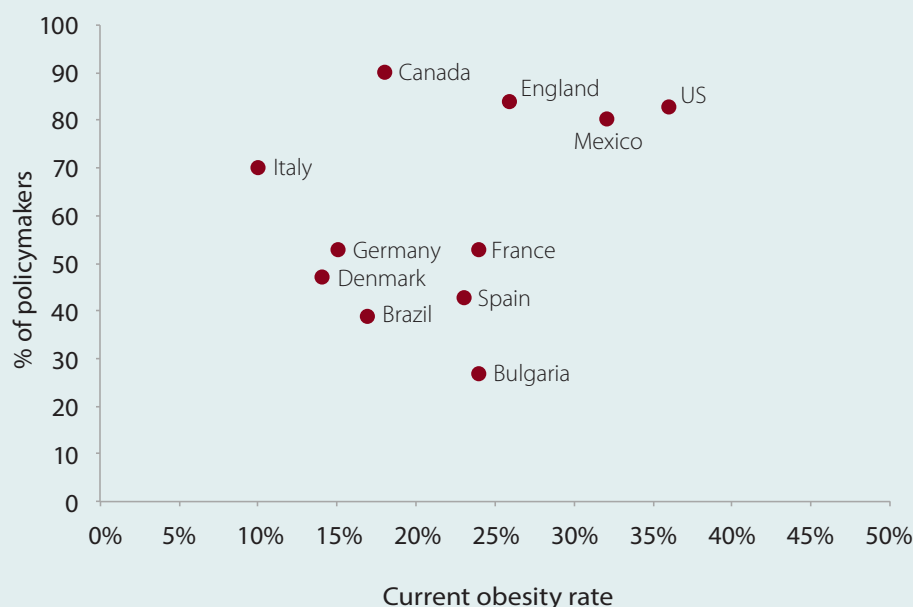
Figure 4: Prevention of obesity in the future



- **Treatment and management of obesity** was also regarded as a strong priority, as figure 5 shows. 61% of the policymakers considered it a ‘high’ priority for the future, but it was considered by most policymakers to be of less importance than prevention. The exception is Canada, where 90% of the policymakers saw treatment/management to be a ‘high’ priority in future (the highest priority afforded to it by any country), a greater number than the 84% of them who saw prevention as a ‘high’ priority.

Obesity was least likely to be seen as a future policy priority in Bulgaria and Brazil.

Figure 5: Management and treatment of obesity in the future



- As with the section of the questionnaire on evidence (section 4.5.5, p. 45 above), a question on whether **prevention of obesity-related diseases** was included to see if this influenced the way in which the policymakers responded when asked about the consequences of obesity. An average of 74% regarded prevention of obesity-related diseases as a 'high' priority – and in most countries the changed focus of the question did not shift the answers much, if at all – with the exception of England (where 13% fewer policymakers saw prevention of obesity-related diseases as a 'high' priority) and Canada (where 13% more policymakers saw prevention of obesity-related diseases as a 'high' priority).

In all three questions, policymakers from Brazil and Bulgaria were the most likely to assess the issues as being of only 'medium' or 'low' priority – perhaps indicative of the range of competing social priorities in the only two non-OECD countries in the survey. In particular, a fifth of the Bulgarian policymakers considered treatment/management as a 'low' priority, and two of them (the only two to state this) expected prevention and treatment/management not to be priorities at all in the future.

It is notable that policymakers from Mexico – with Brazil, one of only two developing nations in this survey, and also facing myriad competing pressures from communicable diseases and other social issues – considered all aspects of obesity to be a major priority. This suggests that the efforts made to date (section 3.9, p. 26 above) will be continued into the future.

Targets on obesity

In the 2014 survey, the policymakers were asked whether their country has in place a national target for obesity.* As the table on p. 8 shows, all the countries except Spain do have national obesity targets, many including deadlines by which they should be achieved. However, just 34% of the policymakers were aware that they had targets, with almost half thinking that they had no targets, and the remainder being unsure.

Mexico was the only country where a majority – 73% – of the policymakers were aware of the existence of the targets (see p. 26 above). In Germany, 77% of the policymakers thought that the country does not have a target – and, while they are right that there is no target in the national action plan that deals with obesity, there is a target in a set of key indicators for 'sustainable development' for the country (see p. 22 above).

* The question on obesity targets was the only item added to the survey between 2013 and 2014. As a consequence, English, Spanish and US policymakers were not asked this question.

5. Summary of survey findings

What? – the extent of obesity

Many of the policymakers did not have a clear idea of the extent of obesity (66%).

An even greater proportion of the policymakers (84%) did not know the extent of overweight.

Many of the policymakers (78%) did not know the BMI cut-off point for obesity.

There was a lack of awareness of the existence of national obesity targets.

- Without this knowledge, policymakers will not appreciate the importance of preventing people at risk of obesity from becoming obese – and preventing people with obesity from becoming more severely obese – with all its consequent health impacts. They may not, therefore, afford obesity prevention the priority that it needs. Reporting against obesity targets would be helpful in raising awareness about progress among policymakers and the general public alike.

Who? – responsibility for obesity

Almost all the policymakers saw individuals, families and the food industry as having responsibility for reducing future obesity levels. However, there was less consensus on the extent of the support people should receive from other groups such as healthcare professionals and government.

- All these actors have a role to play in creating an environment in which it is easier to be healthy – something that Mexico's policymakers were the most likely to recognise. The lack of appreciation of, for example, the role of the government in Germany and the United States, health-care professionals in Spain, or employers in France could be a barrier to progress.

Why? – drivers of obesity

Understanding of the drivers of obesity, and the barriers to personal responsibility for maintaining a healthy weight, varied among the policymakers. The policymakers appreciated that insufficient physical activity is key, but fewer thought that factors such as limited financial resources, lack of time and genetics play a role.

- In many countries (see section 3) there is a socioeconomic gradient of obesity, and poverty does play a role in limiting the choices available to people to live a healthy lifestyle – but clearly not all the policymakers were aware of this.

Issues around food marketing and access to unhealthy food were acknowledged as important drivers of the obesity epidemic, particularly by Mexico's policymakers. Limited access to healthy food was seen as a less pressing issue in most countries.

How? – prevention, treatment and management of obesity

A majority of the policymakers acknowledged that their country's policies on prevention and management of obesity do not cover all bases. The tools that the policymakers regarded as being used most extensively are education and public-health campaigns (which are run in all the countries of the survey), with fiscal interventions, drug treatment and surgery the least likely to be used.

- Given the concern of policymakers with the obesity issue, and their recognition that many tools are not being used, there is scope for policy intervention in a wider range of areas.

The policymakers saw tools and policies on childhood obesity as being more effective than those addressing adult obesity or the prevention of non-communicable diseases.

- There is no room for complacency on child obesity, even where the rate of increase has levelled off – this can mask inequalities and increased severe obesity, and prevalence is still high.

A very high proportion of the policymakers considered that there is need for more evidence on obesity prevention and management, and of obesity-related diseases.

- This call was backed up by the limited knowledge of policymakers on the options that are available, and their effectiveness. Evidence must be presented in a form that is accessible to – and actionable by – policymakers.

When? – obesity priorities now and in the future

The policymakers recognised that obesity will be a policy imperative in the future – although a smaller proportion considered this to be the case in Brazil and Bulgaria, where a wide range of other social issues compete for attention. In the United States, the policymakers felt strongly that the priority around obesity is short-term (to improve current health status) and the majority in Mexico considered the priority to be long term (to reduce the risk of future disease).

Although many policymakers in the countries surveyed have a good understanding of the issues, there is still more that can be done. Policymakers need to be more aware of the extent of obesity (and particularly overweight) in their countries, with a better appreciation of ‘what works’ and the impact of obesity-prevention and -management programmes.

If policymakers have solid knowledge of the extent of the problem and the existing evidence on successful intervention, national policies are more likely to be put in place that adequately address the realities faced by populations struggling to remain of normal weight.

Appendix: Country snapshots

The data on obesity and overweight prevalence is gathered from the national statistics presented in section 3. The information about policymakers' knowledge is taken from the survey on which this report is based (section 4.2).

Brazil

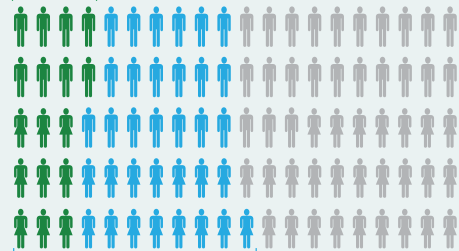
Obesity statistics

17%

of Brazilians have **obesity**.

85%

of policymakers **do not know** the current obesity rate.



51%

of Brazilians have **obesity or overweight**.

87%

of policymakers **do not know** the percent overweight and obese.



10%

of policymakers know the exact BMI obesity cut point.

Bulgaria

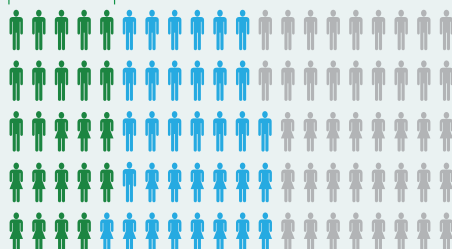
Obesity statistics

24%

of Bulgarians have **obesity**.

80%

of policymakers **do not know** the current obesity rate.



58%

of Bulgarians have **obesity or overweight**.

83%

of policymakers **do not know** the percent overweight and obese.



3%

of policymakers know the exact BMI obesity cut point.

Canada

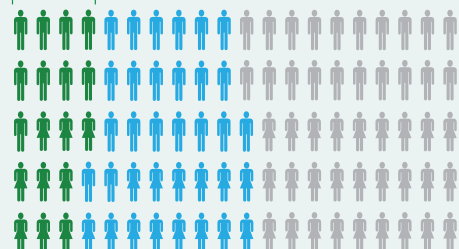
Obesity statistics

18%

of Canadians have **obesity**.

74%

of policymakers **do not know** the current obesity rate.



53%

of Canadians have **obesity or overweight**.

65%

of policymakers **do not know** the percent overweight and obese.



19%

of policymakers know the exact BMI obesity cut point.

Denmark

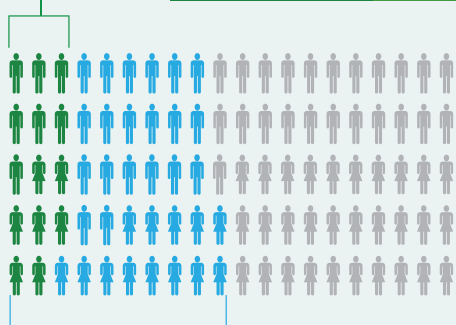
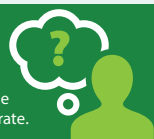
Obesity statistics

14%

of Danes have **obesity**.

63%

of policymakers **do not know** the current obesity rate.



47%

of Danes have **obesity or overweight**.

87%

of policymakers **do not know** the percent overweight and obese.



63%

of policymakers **know** the exact BMI obesity cut point.

England

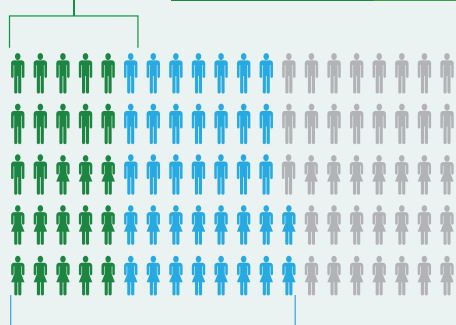
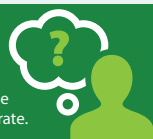
Obesity statistics

25%

of the English have **obesity**.

29%

of policymakers **do not know** the current obesity rate.



62%

of the English have **obesity or overweight**.

68%

of policymakers **do not know** the percent overweight and obese.



52%

of policymakers **know** the exact BMI obesity cut point.

France

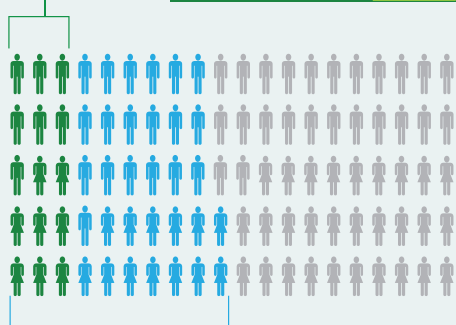
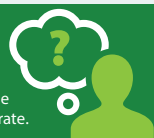
Obesity statistics

15%

of the French have **obesity**.

44%

of policymakers **do not know** the current obesity rate.



47%

of the French have **obesity or overweight**.

90%

of policymakers **do not know** the percent overweight and obese.



13%

of policymakers **know** the exact BMI obesity cut point.

Germany

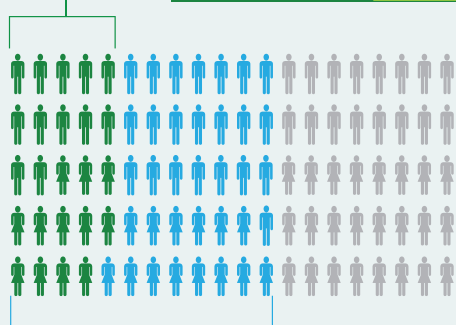
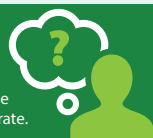
Obesity statistics

24%

of Germans have **obesity**.

63%

of policymakers **do not know** the current obesity rate.



60%

of Germans have **obesity or overweight**.

93%

of policymakers **do not know** the percent overweight and obese.



13%

of policymakers **know** the exact BMI obesity cut point.

Italy

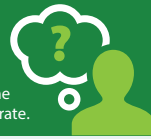
Obesity statistics

10%

of Italians
have **obesity**.

87%

of policymakers
do not know the
current obesity rate.



47%

of Italians
have **obesity** or
overweight.

77%

of policymakers **do not know** the
percent overweight *and* obese.



37%

of policymakers know
the exact BMI obesity
cut point.

Mexico

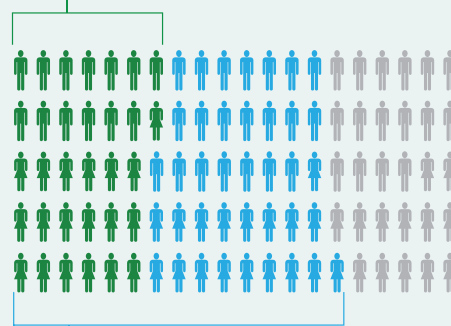
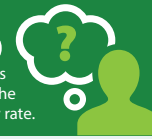
Obesity statistics

32%

of Mexicans
have **obesity**.

80%

of policymakers
do not know the
current obesity rate.



71%

of Mexicans
have **obesity** or
overweight.

73%

of policymakers **do not know** the
percent overweight *and* obese.



20%

of policymakers know
the exact BMI obesity
cut point.

Spain

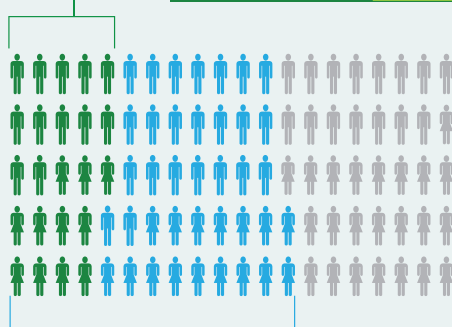
Obesity statistics

23%

of Spaniards
have **obesity**.

30%

of policymakers
do not know the
current obesity rate.



62%

of Spaniards
have **obesity** or
overweight.

100%

of policymakers **do not know** the
percent overweight *and* obese.



33%

of policymakers know
the exact BMI obesity
cut point.

United States

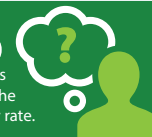
Obesity statistics

36%

of Americans
have **obesity**.

93%

of policymakers
do not know the
current obesity rate.



69%

of Americans
have **obesity** or
overweight.

100%

of policymakers **do not know** the
percent overweight *and* obese.



20%

of policymakers know
the exact BMI obesity
cut point.

References

URLs correct as of May 2014

- 1 WHO, *Overweight and Obesity Fact Sheet*: <http://www.who.int/mediacentre/factsheets/fs311/en/index.html>.
- 2 NICE, *Obesity: the Prevention, Identification, Assessment and Management of Overweight and Obesity in Adults and Children* (Clinical Guideline 43) (2006): <http://www.nice.org.uk/nicemedia/live/11000/30365/30365.pdf>, p. 36.
- 3 E.J. Jacobs, et al., 'Waist circumference and all-cause mortality in a large US cohort', *Arch Intern Med* (2010) 170(15): 1293–301: <http://archinte.jamanetwork.com/article.aspx?articleid=775594>, p. 1293.
- 4 F. Abbasi et al., 'Cardiometabolic risk factors and obesity: does it matter whether BMI or waist circumference is the index of obesity?' *Am J Clin Nutr* (2013) 98(3): 637–40: <http://ajcn.nutrition.org/content/98/3/637.abstract>.
- 5 WHO Expert Consultation, 'Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies', *The Lancet* (2004) 363: 157–63: http://www.who.int/nutrition/publications/bmi_asia_strategies.pdf.
- 6 International Association for the Study of Obesity (IASO), 'About obesity': <http://www.worldobesity.org/aboutobesity/>.
- 7 For example, Foresight, *Tackling Obesity: Future Choices – Obesogenic Environments – Evidence Review*: <http://www.bis.gov.uk/assets/bispartners/foresight/docs/obesity/03.pdf>.
- 8 J. Logue, 'Obesity is associated with fatal coronary heart disease independently of traditional risk factors and deprivation', *Heart* (2011) 97(7): 564–8: <http://heart.bmj.com/content/early/2011/01/24/hrt.2010.211201.short>, p. 567.
- 9 A.G. Renehan et al., 'Body-mass index and incidence of cancer: a systematic review and meta-analysis of prospective observational studies', *The Lancet* (2008) 371(9612): 569–78: <http://www.thelancet.com/journals/lancet/article/PIIS014067360860269X/abstract>, pp. 572–3.
- 10 M. Bombelli et al., 'Impact of body mass index and waist circumference on the long-term risk of diabetes mellitus, hypertension, and cardiac organ damage', *Hypertension* (2011) 58(6): 1029–35: <http://hyper.ahajournals.org/content/early/2011/10/24/HYPERTENSIONAHA.111.175125.full.pdf+html>, p. 1029.
- 11 G. Hu, 'Physical activity, body mass index, and risk of type 2 diabetes in patients with normal or impaired glucose regulation', *Arch Intern Med* (2004) 164: 892–6: <http://archinte.ama-assn.org/cgi/reprint/164/8/892>, Figure 1, p. 895.
- 12 Prospective Studies Collaboration, 'Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies', *The Lancet* (2009) 373(9669): 1083–96: <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2960318-4/fulltext>, p. 1083.
- 13 R. Doll et al., 'Mortality in relation to smoking: 50 years' observations on male British doctors', *BMJ* (2004) 328: 1519: http://www.bmj.com/highwire/filestream/370089/field_highwire_article_pdf/0.pdf, p. 1519.
- 14 A. Berrington de Gonzales et al., 'Body mass index and mortality among 1.46 million white adults', *N Engl J Med* (2010) 363: 2211–19: <http://www.nejm.org/doi/full/10.1056/NEJMoa1000367#t=articleResults>, p. 2213.
- 15 A. Tuthill et al., 'Psychiatric co-morbidities in patients attending specialist obesity services in the UK', *Q J Med* (2006) 99: 317–25: <http://www.diabetes.eu/documents/317.pdf>, p. 317.
- 15a A. R. Jones et al., 'Parental perceptions of weight status in children: the Gateshead Millennium Study', *International Journal of Obesity* (2011) 35: 953–62: <http://www.ncbi.nlm.nih.gov/pubmed/21673651>.
- 16 L. Bahia et al., 'The costs of overweight and obesity-related diseases in the Brazilian public health system: cross-sectional study', *Public Health* (2012) 12: 440: <http://www.biomedcentral.com/content/pdf/1471-2458-12-440.pdf>.
- 17 Public Health Agency of Canada / Canadian Institute for Health Information, *Obesity in Canada: A Joint Report from the Public Health Agency of Canada and the Canadian Institute for Health Information* (2011): <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/oic-oac/assets/pdf/oic-oac-eng.pdf>, p. 28 and Appendix 2.
- 18 B.X. Tran et al., 'Cost analyses of obesity in Canada: scope, quality, and implications'. *Cost Effectiveness and Resource Allocation* (2013) 11:3: <http://www.resource-allocation.com/content/pdf/1478-7547-11-3.pdf>.
- 19 *Ibid.*
- 20 A.L. Worre-Jensen et al., 'The cost of obesity on the Danish health care system', *Ugeskrift for Laeger* (2007) 169 (33): 2634–7 (in Danish): <http://www.ncbi.nlm.nih.gov/pubmed/17725912>.
- 21 Foresight, *Tackling Obesity: Future Choices – Modelling Future Trends in Obesity & Their Impact on Health* (2nd edition) (2007): <http://www.bis.gov.uk/assets/bispartners/foresight/docs/obesity/14.pdf>, Table 5, p. 31.
- 22 Foresight, *Tackling Obesity* (2nd edition), Table 4, p. 31.
- 23 Y.C. Wang et al., 'Health and economic burden of the projected obesity trends in the USA and the UK', *The Lancet* (2011) 378(9793): 815–25: <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673611608143.pdf?id=e16241398b8eb460:6fe957fc:134f1421c94:cff1326900799791>, p. 815.
- 24 C. Emery et al., 'Évaluation du coût associé à l'obésité en France', *La Presse Médicale* (2007) 36(6): 832–40: <http://www.em-consulte.com/en/article/103325>.
- 25 K.P. Knoll and H. Hauner, 'Kosten der adipositas in der bundesrepublik Deutschland', *Gesundheitsökonomie* (2008) 2: 204–10: <http://www.schattauer.de/de/magazine/uebersicht/zeitschriften-a-z/adipositas/inhalt/archiv/issue/87/manuscript/10791.html>, p. 209.
- 26 Study by Scuola Superiore Sant'Anna of Pisa (2009): http://www.sssup.it/news.jsp?ID_NEWS=2774.

- 27 Consiglio regionale del Veneto, 'L'obesita nel Veneto: attualità statistiche, cliniche e indicazioni socio-sanitarie', (2011): http://www.consiglioveneto.it/crvportal/upload_crv/serviziostudi/1372685956745_Obesita.pdf, p. 74.
- 28 S. Barquera, et al., 'Mexico attempts to tackle obesity: the process, results, push backs and future challenges', *Obesity Reviews* (2013) 14(2): 69–78: <http://onlinelibrary.wiley.com/doi/10.1111/obr.12096/abstract>, p. 69.
- 29 L. Latnovic and L. Rodriguez Cabrera, 'Public health strategy against overweight and obesity in Mexico's National Agreement for Nutritional Health', *International Journal of Obesity Supplements* (2013) 3: S12–S14: <http://www.nature.com/ijosup/journal/v3/n1s/abs/ijosup20135a.html>, p. S12.
- 30 See PanAmerican Health Organization website: http://www.paho.org/mex/index.php?option=com_content&view=article&id=621:foro-legislativo-sobre-bebidas-azucaradas&catid=827:noticias
- 31 R. Vázquez and J.M. López, 'Análisis: Obesidad: la epidemia del siglo XXI', *Revista española de Economía de la Salud* (2002) 1(3): 34–45: http://www.economiadelasalud.com/Ediciones/03/PDF/03Analisis_Costes.pdf, p. 40.
- 32 A. Sicras-Mainar et al., 'Healthcare use and costs associated with obesity in Badalona, Spain: a study protocol', *BMJ Open* (2012) 2:e000547: <http://bmjopen.bmj.com/content/2/1/e000547.full>
- 33 E.A. Finkelstein et al., 'Annual medical spending attributable to obesity: payer- and service-specific estimates', *Health Affairs* (2009) 28(5): w822–w831: <http://content.healthaffairs.org/content/28/5/w822.full>, p. w828.
- 34 Y.C. Wang et al., 'Health and economic burden of the projected obesity trends in the USA and the UK', *The Lancet* (2011) 378(9793): 815–25: <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673611608143.pdf?id=e16241398b8eb460:6fe957fc:134f1421c94:cff1326900799791>, p. 815.
- 35 E.A. Finkelstein et al., 'The costs of obesity in the workplace', *Journal of Occupational & Environmental Medicine* (2010) 52(10): 971–6: http://journals.lww.com/joem/Abstract/2010/10000/The_Costs_of_Obesity_in_the_Workplace.4.aspx.
- 36 WHO, *Overweight and Obesity Factsheet*.
- 37 Food and Agriculture Organization of the United Nations, 'Global hunger declining, but still unacceptably high' (September 2010): <http://www.fao.org/docrep/012/al390e/al390e00.pdf>
- 38 K.M. Flegal et al., 'Sources of differences in estimates of obesity-associated deaths from first National Health and Nutrition Examination Survey (NHANES I) hazard ratios', *Am J Clin Nutr* (2010) 91(3): 519–27: <http://ajcn.nutrition.org/content/91/3/519.full.pdf+html>, p. 519.
- 39 WHO, *Overweight and Obesity Factsheet*.
- 40 M. Chan, 'The worldwide rise of chronic noncommunicable diseases: a slow-motion catastrophe' (opening remarks at the First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control, Moscow, Russian Federation, 28 April 2011): http://www.who.int/dg/speeches/2011/ministerial_conf_ncd_20110428/en/index.html.
- 41 http://ec.europa.eu/health/archive/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf
- 42 http://ec.europa.eu/health/nutrition_physical_activity/docs/childhoodobesity_actionplan_2014_2020_en.pdf
- 43 United Nations, Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases (September 2011): http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf, para. 45(c).
- 44 WHO, Global Action Plan on the Prevention and Control of Non-communicable Diseases 2013–2020 (2013) http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf.
- 45 Ministério de Saúde, 'Vigitel Brasil 2012: Vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico' (2012): http://www.sbppt.org.br/downloads/arquivos/vigitel_2012.pdf
- 46 E.C. Moura and R.M. Claro, 'Estimates of obesity trends in Brazil, 2006–2009', *International Journal of Public Health* (2012) 57(1): 127–33: <http://link.springer.com/article/10.1007/s00038-011-0262-8>, p. 127.
- 47 C.K. Lutter et al., 'Progress towards Millennium Development Goal 1 in Latin America and the Caribbean: the importance of the choice of indicator for undernutrition', *Bulletin of the World Health Organization* (2011) 89: 22–30: <http://www.who.int/bulletin/volumes/89/1/10-078618.pdf>
- 48 A. Pelegrini et al. 'Comparison of three criteria for overweight and obesity classification in Brazilian adolescents', *Nutrition Journal* (2013) 12:5. Available online: <http://www.nutritionj.com/content/12/1/5>
- 49 J. A. Rivera et al., 'Childhood and adolescent overweight and obesity in Latin America: a systematic review', *Lancet Diabetes and Endocrinology* (2013): <http://download.thelancet.com/pdfs/journals/landia/PIIS2213858713701736.pdf?id=baakVPxd9t0CehWiX5ptu>
- 50 Ministério de Saúde, 'Pesquisa de orçamentos familiares 2008–2009': http://www.ibge.gov.br/home/estatistica/populacao/condicaoodevida/pof/2008_2009/POFpublicacao.pdf, gráfico 18.
- 51 Ministério de Saúde, 'Vigitel Brasil 2012', p.48.
- 52 *Plano Intersetorial de Prevenção e Controle da Obesidade* (2011): http://189.28.128.100/nutricao/docs/geral/apresentacao_plano_obesidade2.pdf
- 53 See P.C. Jaime et al., 'Brazilian obesity prevention and control initiatives', *Obesity Reviews* (2013) 14 Supplement S2: 88–95: <http://onlinelibrary.wiley.com/doi/10.1111/obr.12101/abstract>
- 54 Plano de Ações Estratégicas para o Enfrentamento das Doenças Crônicas Não Transmissíveis no Brasil 2011–2022: <http://www.fnnde.gov.br/arquivos/category/116-alimentacao-escolar?download=7897:plano-de-acoes-estrategicas-para-o-enfrentamento-das-dcnt-no-brasil>
- 55 Ministério da Saúde, *Atualiza a Política Nacional de Alimentação e Nutrição* (National Policy on Food and Nutrition): <http://189.28.128.100/nutricao/docs/geral/pnan2011.pdf>.
- 56 Jaime et al., 'Brazilian obesity prevention and control initiatives', p. 91.
- 57 *Ibid.*, p. 93.

- 58 D.C. Malta and J. Barbosa da Silva, 'Policies to promote physical activity in Brazil', *The Lancet* (2012) 380: 195–6: <http://www.thelancet.com/pdfs/journals/lancet/PIIS0140673612610411.pdf>, p. 196.
- 59 S.M. Matsudo et al., 'The Agita São Paulo Program as a model for using physical activity to promote health', *Pan American Journal of Public Health* (2003) 14(4): 265–72: http://bvsmis.saude.gov.br/bvsmis/is_digital/is_0104/pdfs/IS24%281%29007.pdf. See also Agita Mundo: www.portalagita.org.br/en/agita-mundo.html
- 60 *Ibid.*, p. 92.
- 61 Associação Médica Brasileira e Agência Nacional de Saúde Suplementar, 'Diretrizes Clínicas na Saúde Suplementar – 2012': http://bvsmis.saude.gov.br/bvsmis/publicacoes/diretrizes_clinicas_2012.pdf and L.M. Santos et al., 'Trends in morbid obesity and in bariatric surgeries covered by the Brazilian public health system', *Obesity Surgery* (2008) 20(7): 943–8. <http://www.ncbi.nlm.nih.gov/pubmed/18536975>
- 62 Santos et al., 'Trends in morbid obesity'.
- 63 Sociedade Brasileira de Cirurgia Bariátrica e Metabólica, 'Obesidade sem marcas: cirurgia menos invasiva é um direito' (no date): http://www.sbcbm.org.br/imagens/PressKit_SBCBM.pdf
- 64 Plano de Ações Estratégicas, 2011–2022.
- 65 WHO Global Health Observatory data: <http://apps.who.int/gho/data/?theme=main>
- 66 WHO Europe, 'Nutrition, physical activity and obesity: Bulgaria' (2013): http://www.euro.who.int/_data/assets/pdf_file/0020/243290/Bulgaria-WHO-Country-Profile.pdf
- 67 Национален план за действие 'Храни и хранене 2005–2010' [National Action Plan 'Food and Nutrition'] (2005): <http://www.strategy.bg/FileHandler.ashx?fileId=662>
- 68 WHO Europe, *Nutrition, Physical Activity and the Prevention of Obesity: Policy Developments in the WHO European Region* (2007): http://www.euro.who.int/_data/assets/pdf_file/0013/111028/E90669.pdf, p. 13.
- 69 S. Petrova et al., 'Food and nutrition action plan of Bulgaria, 2005–2010: achievements and challenges', *Bulgarian Journal of Public Health* (2012) 4(2): 30–58: http://ncphp.government.bg/files/2_2012_KoricaTialo.pdf
- 70 *Ibid.*, p. 38.
- 71 Национална програма за превенция на хроничните незаразни болести 2014–2020 [National Program for the Prevention of Chronic Non-communicable Diseases] (2013): <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&id=861>
- 72 National Framework for Responsible Commercial Communication of Food and Drinks (2010): http://www.nss-bg.org/en/kodeks_hr.php
- 73 WHO Europe, *Nutrition, Physical Activity and the Prevention of Obesity*, p. 14.
- 74 Ordinance № 37 of 21 July 2009 on the healthy nutrition of schoolchildren: <http://www.mh.government.bg/Articles.aspx?lang=bg-BG&pageid=391&categoryid=1564>, Art. 10, p. 3.
- 75 National Program for the Prevention of Chronic Non-communicable Diseases, p. 15.
- 76 *Ibid.*, pp. 14–15.
- 77 Government of Canada, 'Statistics Canada', available online: <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1050501&pattern=obese&tabMode=dataTable&srchLan=-1&p1=1&p2=-1>. Manipulation of data on this site is required.
- 78 *Ibid.*
- 79 K.C. Roberts, et al., 'Overweight and obesity in children and adolescents: results from the 2009 to 2011 Canadian Health Measures Survey', *Statistics Canada Health Reports* (2012) 23(3): <http://www.statcan.gc.ca/pub/82-003-x/2012003/article/11706-eng.pdf>, p.4.
- 80 Public Health Agency of Canada, *Curbing Childhood Obesity: A Federal, Provincial and Territorial Framework for Action to Promote Healthy Weights* (2010): <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/framework-cadre/pdf/ccofw-eng.pdf>, p. 1.
- 81 PHAC / CIHI, *Obesity in Canada*, p. 21.
- 82 *Ibid.*, p. 19.
- 83 *Ibid.*, pp. 1 and 13.
- 84 C.C. Gotay et al., 'Updating the Canadian obesity maps: an epidemic in progress', *Canadian Journal of Public Health* (2013) 104(1): e64–e68: <http://journal.cpha.ca/index.php/cjph/article/viewFile/3513/2754>, p. e65.
- 85 *The Integrated Pan-Canadian Healthy Living Strategy 2005*: <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/ipchls-spimmvs/pdf/ipchls-spimmvs-eng.pdf>
- 86 *Investir pour l'avenir: Plan d'action gouvernemental de promotion des saines habitudes de vie et de prevention des problemes relies au poids 2006–2012*: http://www.quebecenforme.org/media/1384/investir_pour_lavenir.pdf
- 87 Public Health Agency of Canada, *The 2008 Report on the Integrated Pan-Canadian Healthy Living Strategy*: <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/ipchls-spimmvs/2008/pdf/ripchl-rspimmvs-2008-eng.pdf>, p. 3.
- 88 PHAC, *Curbing Childhood Obesity*.
- 89 *No Time to Wait: the Healthy Kids Strategy* (2013): http://www.health.gov.on.ca/en/common/ministry/publications/reports/healthy_kids/healthy_kids.pdf
- 90 '2006 Canadian Clinical Guidelines for the Management and Prevention of Obesity in Adults and Children', *Canadian Medical Association Journal* (2007) 176(8): <http://www.cmaj.ca/content/suppl/2007/09/04/176.8.S1.DC1/obesity-lau-onlineNEW.pdf>
- 91 *Ibid.*, pp. 7–8.
- 92 See *Pan-Canadian Healthy Living Strategy*, p. 27 and *Investir pour l'avenir*, p. 14.
- 93 *Ontario's Action Plan for Health Care* (2012): http://www.health.gov.on.ca/en/ms/ecfa/healthy_change/docs/rep_healthychange.pdf, p. 7.
- 94 Sundhedsstyrelsen, *Danskernes Sundhed – Den Nationale Sundhedsprofil* (2013): <http://sundhedsstyrelsen.dk/en/news/2014/-/media/8538E83A23B64880B3960909F85FED4D.ashx?m=.pdf>, p. 94.

- 95 *Ibid.*, p. 92.
- 96 WHO, 'Nutrition, physical activity and obesity: Denmark' (2013): http://www.euro.who.int/_data/assets/pdf_file/0006/243294/Denmark-Who-Country-Profile.pdf
- 97 C.S. Morgen et al., 'Trends in prevalence of overweight and obesity in Danish infants, children and adolescents – are we still on a plateau?', *PLoS One* (2013) 8(7): <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0069860>
- 98 *Ibid.*, p. 3.
- 99 Sundhedsstyrelsen, *Danskernes Sundhed – Den Nationale Sundhedsprofil*, p. 94.
- 100 *Ibid.*, p. 108.
- 101 J. Matthiessen et al., 'Trends in overweight and obesity in Danish children and adolescents: 2000–2008 – exploring changes according to parental education', *Scandinavian Journal of Public Health* (2014), online only: <http://sjp.sagepub.com/content/early/2014/02/10/1403494813520356.abstract>
- 102 Sundhedsstyrelsen, 'Den nationale sundhedsprofil 2010' – Hvordan har du det?: <http://sundhedsstyrelsen.dk/publ/Publ2010/CFF/Sundhedsprofiler/DenNationaleSHP.pdf>, p. 72.
- 103 *Sund hele livet – de nationale mål og strategier for folkesundheden 2002-10* (2002): <http://www.sum.dk/Aktuelt/Publikationer/~media/F7BABB17699E42B4A11623E137D73D0C.ashx>
- 104 M. Olejaz et al., 'Denmark: health system review', *Health Systems in Transition* (2012) 14(2): http://www.euro.who.int/_data/assets/pdf_file/0004/160519/e96442.pdf, pp. 107–8.
- 105 *Ibid.*, p. 108.
- 106 National Board of Health, Center for Health Promotion and Prevention, 'National Action Plan against Obesity' (2003): http://sundhedsstyrelsen.dk/publ/publ2003/national_action_plan.pdf
- 107 *Ibid.*, p. 15.
- 108 Nordic Council of Ministers, *Health, Food and Physical Activity: Nordic Plan of Action on Better Health and Quality of Life through Diet and Physical Activity* (2006): <http://archive.oxa.org/knowledge/publications/nordic-action-plan-july-2006.pdf>
- 109 Keyhole nutrition labelling website: <http://www.norden.org/en/nordic-council-of-ministers/council-of-ministers/council-of-ministers-for-fisheries-and-aquaculture-agriculture-food-and-forestry-mr-fjls/keyhole-nutrition-label>
- 110 Forum of Responsible Food Marketing Communication, *Code of Responsible Food Marketing Communication to Children* (2008): <http://kodeksforfoedevarereklamer.di.dk/SiteCollectionDocuments/Foreningssites/kodeksforfoedevarereklamer.di.dk/Downloadboks/Kodeks%20eng%20sep%202008%20samlet.pdf>
- 111 C. Snowdon, *The Proof of the Pudding: Denmark's Fat Tax Fiasco* (2013): <http://www.iea.org/sites/default/files/publications/files/The%20Proof%20of%20the%20Pudding.pdf>; 'Denmark cancels "fat tax" and shelves "sugar tax" because of threat of job losses', *BMJ* (2012) 345:e7889345 (21 November 2012): <http://www.bmj.com/content/345/bmj.e7889>
- 112 Danish Health and Medicines Authority (2011): <http://sundhedsstyrelsen.dk/en/medicines/reimbursement/individual-reimbursement/single-reimbursement/guiding-criteria/obesity-xenical>
- 113 Indenrigs og Sundhedsministeriet, *Retningslinjer for visitation og henvisning på fedmeområdet* (2010): http://www.regioner.dk/~media/Files/Sundhed/Retningslinjer%20for%20visitation%20og%20henvisning%20til%20fedmekirurgi_PDF.ashx
- 114 *Nordic Plan of Action on Better Health*, p. 34.
- 115 *Health of the Nation White Paper* (1992), cited in Foresight, *Tackling Obesity: Future Choices – Modelling Future Trends in Obesity & Their Impact on Health* (2nd edition) (2007): <http://www.bis.gov.uk/assets/bispartners/foresight/docs/obesity/14.pdf>, p. 13.
- 116 Health and Social Care Information Centre, *Statistics on Obesity, Physical Activity and Diet: England 2014* (2014): <http://www.hscic.gov.uk/catalogue/PUB13648/Obes-phys-acti-diet-eng-2014-rep.pdf>, p. 11.
- 117 *Ibid.*, p.5.
- 118 *Ibid.*, p. 5.
- 119 *Health Survey for England 2012*, trend tables: <http://www.hscic.gov.uk/catalogue/PUB13219/HSE2012-Child-trend-tbls.xls>, table 4.
- 120 *Ibid.*
- 121 *Health Survey for England 2012*, chapter 10 – 'Adult anthropometric measures, overweight and obesity': <http://www.hscic.gov.uk/searchcatalogue?productid=13887&q=health+survey+for+england&sort=Relevance&size=10&page=1#top>, p. 23.
- 122 Public Health England (2014): http://www.noo.org.uk/visualisation/adult_obesity. © Crown copyright and database rights 2012 Ordnance Survey 100020290.
- 123 *Healthy Weight, Healthy Lives: A Cross-government Strategy for England* (2008): http://webarchive.nationalarchives.gov.uk/20100407220245/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_084024.pdf
- 124 *Healthy Lives, Healthy People: A Call to Action on Obesity in England* (2011): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213720/dh_130487.pdf
- 125 White Paper, *Healthy Lives, Healthy People: Our Strategy for Public Health in England* (2010): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf, p. 51
- 126 Department of Health, *Healthy Child Programme: Pregnancy and the First Five Years of Life* (2009): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/167998/Health_Child_Programme.pdf
- 127 Department of Health, *About the Public Health Responsibility Deal*: <https://responsibilitydeal.dh.gov.uk/about/>
- 128 Obesity Review Group: <https://www.gov.uk/government/groups/obesity-review-group>
- 129 NICE, *Preventing Type 2 Diabetes: Risk Identification and Interventions for Individuals at High Risk* (Public Health Guidance 38) (2012): <http://www.nice.org.uk/nicemedia/live/13791/59951/59951.pdf>

- 130 NICE, *Obesity*, p. 52.
- 131 *Ibid.*, p. 54.
- 132 *A Call to Action*, p. 23.
- 133 Health and Social Care Information Centre, *Health Survey for England 2009: Volume 1: Health and Lifestyles* (2010): <http://www.hscic.gov.uk/catalogue/PUB00414/heal-surv-heal-life-eng-2009-rep-v2.pdf>, p. 113.
- 134 *Ibid.*, p. 196.
- 135 ObEpi-Roche 2012, 'National survey of obesity and overweight': http://www.rocche.fr/home/recherche/domaines_therapeutiques/cardio_metabolisme/enquete_nationale_obepi_2012.html#sthash.ZpQEHITL.dpuf
- 136 OECD, 'Obesity and the economics of prevention: fit not fat. Key facts – France, update 2012': <http://www.oecd.org/health/health-systems/49712339.pdf>, p. 1.
- 137 *Ibid.*, p. 2.
- 138 WHO Europe, 'Nutrition, physical activity and obesity: France, 2013': http://www.euro.who.int/_data/assets/pdf_file/0009/243297/France-WHO-Country-Profile.pdf
- 139 OECD, 'Obesity and the economics of prevention: France'.
- 140 French National Nutrition and Health Programme 2011–2015: http://www.sante.gouv.fr/IMG/pdf/PNNS_UK_INDD_V2.pdf, p. 49.
- 141 A. Robertson, 'Obesity and socio-economic groups in Europe: evidence review and implications for action', European Commission (2007): http://ec.europa.eu/health/ph_determinants/life_style/nutrition/documents/ev20081028_rep_en.pdf, pp. 31–4, and OECD, 'Obesity and the economics of prevention: key facts'.
- 142 OECD, 'Obesity and the economics of prevention: France'.
- 143 ObEpi-Roche 2012, 'National survey of obesity and overweight'.
- 144 See WHO, *Global Nutrition Policy Review: What Does it take to Scale Up Nutrition Action?* (2013): http://apps.who.int/iris/bitstream/10665/84408/1/9789241505529_eng.pdf, p. 87.
- 145 Ministry of Health and Solidarity, *Second National Nutrition and Health Programme 2006–2010: Actions and Measures* (2006): <http://www.sante.gouv.fr/IMG/pdf/pnns2.pdf>.
- 146 *Rapport sur l'application de la charte alimentaire à la télévision – Février 2009/Février 2010*: <http://www.csa.fr/Etudes-et-publications/Les-autres-rapports/Rapport-sur-l-application-de-la-charte-alimentaire-a-la-television-Fevrier-2009-Fevrier-2010>
- 147 French National Nutrition and Health Programme 2011–2015.
- 148 Ministry of Health, *French Obesity Plan 2010–2013*: http://www.sante.gouv.fr/IMG/pdf/PO_UK_INDD.pdf
- 149 Haute Autorité de Santé, *Overweight and Obesity in Adults: First-line Medical Management* (2011): http://www.has-sante.fr/portail/upload/docs/application/pdf/2012-10/overweight_and_obesity_in_adults_first_line_medical_management_version_anglaise.pdf
- 150 Haute Autorité de Santé, *Clinical Practice Guidelines: Obesity Surgery in Adults* (2009): http://www.has-sante.fr/portail/upload/docs/application/pdf/2010-11/obesity_surgery_-_guidelines.pdf
- 151 *Ibid.*, p. 6.
- 152 French National Nutrition and Health Programme 2011–2015, p. 14.
- 153 *Ibid.*, pp. 13–14.
- 154 G.B.M. Mensink et al., 'Overweight and obesity in Germany: results of the German Health Interview and Examination Survey for adults', *Bundesgesundheitsbl* (2013) 56: 786–94: <http://edoc.rki.de/oa/articles/re1TvD7NKLhTk/PDF/20DMwbq1YNPdq.pdf>, p. 4.
- 155 B.M. Kurth et al., 'Die verbreitung von übergewicht und adipositas bei kindern und jugendlichen in Deutschland', *Bundesgesundheitsbl* (2007) 50: 736–794: <http://edoc.rki.de/oa/articles/reryPJPcmUGw/PDF/20pyWvIPNYV52.pdf>, p. 737.
- 156 Mensink et al., 'Overweight and obesity in Germany', p. 5.
- 157 German Federal Statistical Office, *Mikrozensus 2009 – Questions about Health* (2010): <https://www.destatis.de/EN/Homepage.html>.
- 158 *IN FORM: German National Initiative to Promote Healthy Diets and Physical Activity (The National Action Plan for the Prevention of Poor Dietary Habits, Lack of Physical Activity, Overweight and Related Diseases)* (2008): http://www.bmel.de/SharedDocs/Downloads/EN/Publications/InForm.pdf?__blob=publicationFile
- 159 Plattform Ernährung und Bewegung website: <http://www.pebonline.de/>
- 160 Gut Drauf: <https://www.gutdrauf.net/>
- 161 National Cycling Plan 2020: <http://edoc.difu.de/edoc.php?id=1U032RD6>
- 162 *Prevention and Treatment of Obesity: Evidence-based Guideline of the DDG*: http://www.deutsche-diabetes-gesellschaft.de/fileadmin/Redakteur/Leitlinien/Englische_Leitlinien/EBLL_ADIPOSITAS_Update_05_2007_ENGL.pdf, p. 15.
- 163 N. Runkel et al., 'Evidence-based German guidelines for surgery for obesity', *International Journal of Colorectal Disease* (2011) 26: 397–404: http://www.adipositas-gesellschaft.de/fileadmin/PDF/Leitlinien/Chirurgie_Kurzform_BS_Leitlinie.pdf, p. 400.
- 164 See <http://www.bundesregierung.de/Content/EN/StatischeSeiten/Schwerpunkte/Nachhaltigkeit/en-nachhaltigkeit-2007-04-13-erfolgskontrolle-die-21-indikatoren.html>
- 165 *Sustainable Development in Germany: Indicator Report 2012*: https://www.destatis.de/EN/Publications/Specialized/EnvironmentalEconomicAccounting/Indicators2012.pdf;jsessionid=6DD534DBDEFBD8FD1D77AC068764E8BF.cae1?__blob=publicationFile, pp. 50–1.
- 166 *IN FORM*, pp. 9–10.
- 167 Consiglio regionale del Veneto, 'L'obesita nel Veneto', p. 24.
- 168 Ministero della salute, *Report on the Health Status of Country 2011*: http://www.archeo.salute.gov.it/rssp2011/documenti/RSSP_2011_Inglese_web.pdf, p. 58.

- 169 *Ibid.*, p. 58.
- 170 Consiglio regionale del Veneto, 'L'obesita nel Veneto', p. 28.
- 171 Organisation of Economic Co-operation and Development (OECD), 'Obesity and the economics of prevention: fit not fat. Key facts – Italy, update 2012': <http://www.oecd.org/italy/49712603.pdf>, p. 2.
- 172 ISTAT, *La vita quotidiana nel 2009* (2010): http://www3.istat.it/dati/catalogo/20110121_00/inf_10_05_la_vita_quotidiana_nel_2009.pdf, p. 84.
- 173 Piano Nazionale della Prevenzione 2010–2012: http://www.salute.gov.it/imgs/C_17_pubblicazioni_1384_allegato.pdf: pp. 30–1.
- 174 Regione Campania: Piano regionale della prevenzione 2010–2012: <http://www.beta.regione.campania.it/assets/documents/piano-regionale-della-prevenzione.pdf>
- 175 Ministero della salute, 'Report on the health status of country 2011', p. 13.
- 176 Università di Siena, Laboratorio di Ricerca Educazione e Promozione della Salute – CREPS, Progetto "Buone pratiche di alimentazione – Intervento di promozione del consumo di prodotti ortofrutticoli freschi" "...e Vai con la Frutta": <http://www.creps-siena.eu/e-vai-con-la-frutta.html>
- 177 Associazione Italiana di Dietetica e Nutrizione Clinica, 'Standard Italiani per la Cura dell'Obesità 2012/2013': <http://www.sio-obesita.org/Standard.pdf>
- 178 *Ibid.*, p. 58.
- 179 *Ibid.*, p. 61.
- 180 Piano Nazionale della Prevenzione 2010–2012, p. 30.
- 181 OECD StatExtracts website: <http://stats.oecd.org/>. Manipulation of data on this site is required.
- 182 S. Barquera et al., 'Prevalencia de obesidad en adultos mexicanos, ENSANUT 2012', *Salud Publica Mex* (2013) 55 suppl 2: S151–S160: <https://siid.insp.mx/textos/com-5356120.pdf>, p. S153.
- 183 *Ibid.*, p. S154.
- 184 UN Food and Agricultural Organisation, *The State of Food and Agriculture* (2013): <http://www.fao.org/docrep/018/i3300e/i3300e.pdf>, p. 77 and p. 79.
- 185 Statistics from National Nutrition Survey 2012 (ENSANUT) (presented by Dr Homero Martinez: <http://www.c3health.org/wp-content/uploads/2013/10/Homero-Martinez-presentation-October-2013.pdf>).
- 186 Secretaria de Salud, *Bases para una Política de Estado para la Prevención de la Obesidad* (2009): <http://www.insp.mx/centros/nutricion-y-salud/prensa/1887-provoca-obesidad-entre-8-y-10-de-las-muertes-prematuras.html>.
- 187 D. Perez-Salgado et al., 'Diagnosis and treatment of obesity among Mexican adults', *Obesity Facts* (2012) 5: 937–46: <http://www.karger.com/Article/Pdf/346325>
- 188 J.P. Gutiérrez et al., *National Health and Nutrition Survey 2012. National Results* (Instituto Nacional de Salud Pública: 2012) (in Spanish): see also <http://ensanut.insp.mx/>. Information generated for this map by Tania Cony Aburto Soto.
- 189 Acuerdo Nacional para la Salud Alimentaria: Estrategia contra el sobrepeso y la obesidad (2010): <http://www.promocion.salud.gob.mx/dgps/descargas1/programas/Acuerdo%20Original%20con%20creditos%2015%20feb%2010.pdf>
- 190 Estrategia Nacional para la Prevención y Control del Sobrepeso, la Obesidad y la Diabetes (2013): http://promocion.salud.gob.mx/dgps/descargas1/estrategia/Estrategia_con_portada.pdf
- 191 Barquera et al., 'Mexico attempts to tackle obesity'.
- 192 See, for example, PAHO website: http://www.paho.org/mex/index.php?option=com_content&view=article&id=621:foro-legislativo-sobre-bebidas-azucaradas&catid=827:noticias
- 193 M.A. Colchero et al., 'Impuesto al refresco [Soda tax]': <http://www.insp.mx/epppo/blog/2946-imp-refresco.html> (Instituto Nacional de Salud Pública blog) (no date).
- 194 See http://www.eas.eu/News_Item/3062, 6 November 2013.
- 195 *Ibid.*
- 196 Barquera et al., 'Prevalencia de obesidad en adultos mexicanos', p. 151.
- 197 *Guía de Práctica Clínica: diagnóstico, tratamiento y prevención de sobrepeso y obesidad en el adulto* www.saludbc.gob.mx/wp-content/uploads/2011/02/IMSS_046_08_EyR.pdf
- 198 Perez-Salgado, 'Diagnosis and treatment of obesity', pp. 940–1.
- 199 Acuerdo Nacional para la Salud Alimentaria (2010), p. 41.
- 200 J.L. Gutiérrez-Fisac et al., 'Prevalence of general and abdominal obesity in the adult population of Spain, 2008–2010: the ENRICA study', *Obesity Reviews* (2012) 13: 388–92: <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-789X.2011.00964.x/abstract>
- 201 F.J. Basterra-Gortari et al., 'Tendencias de la obesidad, diabetes mellitus, hipertensión e hipercolesterolemia en España (1997–2003)', *Med Clin (Barc)* (2007) 129(11): 405–8: <http://z.l.eelsevier.es/es/revista/medicina-clinica-2/tendencias-obesidad-diabetes-mellitus-hipertension-e-hipercolesterolemia-13110464-originales-2007>, p. 406.
- 202 F.J. Basterra-Gortari et al., 'Increasing trend in the prevalence of morbid obesity in Spain: from 1.8 to 6.1 per thousand in 14 years', *Rev Esp Cardiol* (2011) 64(5): 424–6: <http://www.revespcardiol.org/en/linkresolver/increasing-trend-in-the-prevalence/90003633/>
- 203 J.J. Sánchez-Cruz et al., 'Prevalence of child and youth obesity in Spain in 2012', *Rev Esp Cardiol* (2013) 66(5): 371–6: <http://www.ncbi.nlm.nih.gov/pubmed/23375996>
- 204 ALADINO study: <http://www.naos.aesan.msssi.gob.es/naos/ficheros/investigacion/ALADINO.pdf>
- 205 Gutiérrez-Fisac et al., 'Prevalence of general and abdominal obesity', p. 388.
- 206 *Ibid.*, p. 391.
- 207 NAOS: http://www.naos.aesan.msssi.gob.es/naos/ficheros/estrategia/NAOS_Strategy.pdf.
- 208 Law 17/2011, chapter VII – see *Boletín Oficial del Estado*: http://www.observatorio.naos.aesan.msssi.gob.es/docs/docs/documentos/ley_seguridad_alimentaria.pdf, p. 71302.

- 209 'Evaluación y seguimiento de la Estrategia NAOs: conjunto mínimo de indicadores' (2011): http://www.observatorio.naos.aesan.msssi.gob.es/docs/docs/documentos/11_2011.pdf
- 210 Agencia Española de Seguridad Alimentaria y Nutrición press release, 18 January 2013: http://www.aesan.msc.es/en/AESAN/web/notas_prensa/nutricion_estudio_obesidad.shtml
- 210a <http://www.ciberobn.es>
- 211 M.A. Rubio et al., 'Documento de consenso sobre cirugía bariátrica' (consensus document of the Sociedad Española para el Estudio de la Obesidad – SEEDO) (2011): <http://xa.yimg.com/kq/groups/23920535/902246584/name/Documento...pdf>
- 212 Ministry for Health and Social Policy, Clinical Practice Guideline for the Prevention and Treatment of Childhood and Juvenile Obesity (2009): http://www.guiasalud.es/GPC/GPC_452_obes_infantoyjuv_AATRM_compl_en.pdf
- 213 SEEDO, 'Recomendaciones nutricionales basadas en la evidencia para la prevención y el tratamiento del sobrepeso y la obesidad en adultos' (2011): http://www.naos.aesan.msssi.gob.es/naos/ficheros/investigacion/Consenso_SEEDO.pdf
- 214 Rubio et al., 'Documento de consenso'.
- 215 WHO, Global Action Plan on NCDs.
- 216 2010 data from K.M. Flegal et al., 'Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999–2010', *JAMA* (2012) 307(5): 491–7: <http://jama.jamanetwork.com/article.aspx?articleID=1104933>, p. 491; earlier data from K.M. Flegal et al., 'Overweight and obesity in the United States: prevalence and trends, 1960–1994', *International Journal of Obesity* (1998) 22(1): 39–47: <http://www.nature.com/ijo/journal/v22/n1/pdf/0800541a.pdf>, table 5.
- 217 Flegal, 'Prevalence of obesity 1999–2010', p. 493.
- 218 *Ibid.*
- 219 US Centers for Disease Control and Prevention, 'Youth Risk Behavior Surveillance – United States 2011', *Morbidity and Mortality Weekly Report* (2012) 61 (ss4), 1–162.
- 220 C.L. Ogden et al., 'Prevalence of obesity and trends in body mass index among US children and adolescents, 1999–2010', *JAMA* (2012) 307(5): 483–90: <http://jama.jamanetwork.com/article.aspx?articleid=1104932>, p. 483.
- 221 Trust for America's Health and the Robert Wood Johnson Foundation, *F as in Fat 2013: How Obesity Threatens America's Future* (2013): <http://healthyamericans.org/health-issues/wp-content/uploads/2013/08/TFAH2013FasInFatReport29.pdf>, p. 11.
- 221a R. Sturm and A. Hattori, 'Morbid obesity rates continue to rise rapidly in the United States' *International Journal of Obesity* (2013) 37(6): 889–91: <http://www.nature.com/ijo/journal/v37/n6/full/ijo2012159a.html> and A.C. Skinner and J.A. Skelton, 'Prevalence and trends in obesity and severe obesity among children in the United States, 1999 – 2012' *JAMA Pediatrics* (2014) (online publication first): <http://archpedi.jamanetwork.com/article.aspx?articleid=1856480>
- 222 Trust for America's Health, *F as in Fat 2013*, p. 14.
- 223 *Ibid.*, p. 7.
- 224 <http://www.letsmove.gov/>
- 225 See, for example, Robert Wood Johnson Foundation press release (8 July 2013), 'New York City: signs of progress toward reversing the childhood obesity epidemic': <http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2013/07/new-york-city--signs-of-progress.html>
- 226 USPSTF, *Screening for Obesity in Adults*: <http://www.uspreventiveservicestaskforce.org/3rduspstf/obesity/obesrr.htm#ref26>.
- 227 Centers for Medicare and Medicaid Services (CMS), *Decision Memo for Intensive Behavioral Therapy for Obesity* (CAG-00423N) (CMS, 2011): <http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?&NcaName=Intensive%20Behavioral%20Therapy%20for%20Obesity&bc=ACAAAAAIAAAA&NCAId=253&>
- 228 National Heart, Lung and Blood Institute (NIH), *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report* (1998): http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf, p. xx [sic].
- 229 NIDDK, *Bariatric Surgery for Severe Obesity* (2013): <http://win.niddk.nih.gov/publications/gastric.htm>.
- 230 NIH, *Strategic Plan for NIH Obesity Research* (2011): http://www.obesityresearch.nih.gov/about/StrategicPlanforNIH_Obesity_Research_Full-Report_2011.pdf.
- 231 *Healthy People 2020*: <http://www.healthypeople.gov/2020/default.aspx>
- 232 See Nutrition and Weight Status (within *Healthy People 2020*), <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=29>
- 233 *Ibid.*
- 234 *Healthy People 2010 Final Review*: http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_final_review.htm



The European Association for the Study of Obesity (EASO) (www.easo.org) is the leading European scientific and practice-based professional membership association in its field, with networks in over 30 countries. EASO facilitates and engages in actions that prevent and combat the epidemic of obesity. It contributes to high level European and national scientific consultations, hosts the annual European Congress on Obesity, has dynamic and active topic specific Task Forces and Working Groups, and coordinates obesity education across Europe.

EASO is a charity registered in England and Wales (no. 1111288) and a company limited by guarantee (no. 5483950): Sheen Road, Richmond, London TW9 1AE, UK.



C3 Collaborating for Health (www.c3health.org) is a non-governmental organisation based in London and working globally to tackle four major chronic, non-communicable diseases (cardiovascular disease, diabetes, chronic respiratory disease and many cancers) by focusing on the three biggest risk factors: tobacco, poor diet (including the harmful use of alcohol) and lack of physical activity.

C3 is a charity registered in England and Wales (no. 1135930) and a company limited by guarantee (no. 6941278): 28 Margaret Street, London, W1W 8RZ, UK.



This report is supported by an unrestricted grant from Novo Nordisk A/S